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Original Contributions.

ARTICLE III.

A CASE OF OVARIOTOMY.

BY E. B. WOLCOTT, M.D., of Milwaukee, Wis.

EDITOR CHICAGO MEDICAL EXAMINER:

DEAR SIR:—The following case of ovariotomy, as an element of statistics, may be worth reporting. If you think so, please give it a place in the EXAMINER:—

Miss W., aged about 27, some three years and a-half prior to the operation, felt the first symptoms that ultimately called for ovariotomy. In the fall of 1863, one year after the tumor was first discovered, her menses ceased. Soon after, she began to "bloat," as she termed it, and got weak. In May, of 1864, the abdomen filled rapidly with water, and to such an extent that tapping became indispensable. From that time till I first saw her, which was on the 22d of September, 1865, the operation had been repeated nineteen times. I found the abdomen much distended, although but ten days had elapsed since the last tapping. She was failing rapidly in flesh and strength, and presented a clear case for an operation, if, after emptying the abdomen of water, no insuperable difficulties were discovered.

The next day, accompanied by my brother and Dr. SOLON MARKS, I drew off the water, and proceeded to an examination

of the tumor, which was favored by the relaxed condition of the abdominal parietes. Although pretty large, no extensive adhesions existed, nor other conditions forbidding an operation, which was, therefore, recommended and without hesitation submitted to.

The incision was made in the usual place and manner—at first, about five inches in length, intending, if, as I suspected, the tumor proved to be multilocular, to reduce the size by emptying the cysts. This was impracticable, from the thick consistence of the contents. I therefore extended the incision to the umbilicus; this enabled me, by pretty firm pressure, to bring the tumor to the surface, through the opening. All adhesions were easily broken by the fingers. I found it attached to the right ovary by a pedicle about two inches wide, by three-quarters of an inch in thickness. This was ligated by passing a double cord through the centre and tying both ways, with great firmness. After detaching the tumor and cleansing the parts in the usual way, the wound was closed by interrupted sutures, including all the structures, save the peritoneum. The ligatures of the pedicle, preserving both ends of each, were twisted into a cord and brought to the surface through the lower angle of the wound, without attempting to confine the pedicle to the surface, which, from its shortness, would have drawn the point of attachment much below the level of the pubes. This disposition of the ligatures was intended to preserve an opening for any matter that might accumulate about the extremity of the pedicle. No adhesive straps were used nor dressing of any kind, save a pledget wet in warm water covering the wound, and changed as often as it became soiled. The patient was now removed to bed, and a grain of morphine administered.

The tumor weighed fifteen pounds; was multilocular, the cysts being filled with a thick, ropy substance.

A brief general outline of subsequent management is all that can be profitable; the details must necessarily vary with each individual case. One of the following pills was given every six hours, beginning in the morning after the operation, which was September 24th:—

℞. Digitalis (leaves,) Quinine, āā ---------- ℈j.
Ext. Hyoscyamus, ---------- ℈ij.
Calomel, Ipecac., āā ---------- gr.v.
Mix for pills No. xx.

The pills were continued for a week, as above, after which they were given once in eight hours. In the meantime occasional doses of morphine and quinine were given when indicated. Bowels were moved on the sixth day after operation, by injection containing emulsion of oil of turpentine, there being some tympanitis. The turpentine was also applied externally over the abdomen, and a bandage snugly pinned over all. Pulse ranged from 90 to 120. Mild, nourishing diet from the first, and on several occasions, where nausea existed, brandy toddy was used.

During the second week, the stitches from the upper portion of the wound were removed.

At the end of the second week, observing an occasional intermission of the pulse, and slight mental disturbance, the pill was given but twice a-day, attributing to the digitalis the above symptoms, and towards the end of the third week discontinued them entirely. The pulse, during this period, ranging from 80 to 100.

On the twentieth day after the operation, a free discharge of matter, somewhat offensive, burst out along the ligatures. This continued, gradually diminishing, about a week after the ligatures came away, which was on the thirtieth day after the operation.

Alternating with the pill, after reducing the number to two a-day, the following prescription was used, of which a teaspoonful was given twice a-day, until after the pill was discontinued, then three times daily for some ten days:—

℞. Quinine, ---------- ℥ss.
Elix. Vit., ---------- ℥j.
Tinct. Cantharides, ---------- ℥j.
Syrup Aurant, ---------- ℥iij.
Mix.

In addition to the above, from time to time, as occasion

required, an opiate was given, and appropriate remedies to check a disposition to diarrhœa.

The specific effects of the digitalis were observable about a week—they would have been alarming had not the case been known.

In the management of the case, the object was to sustain the vital forces as far as could be done prudently, believing that to be the most successful way to prevent even inflammation and its consequences.

Miss W. is now attending to the domestic affairs of her father's household, in apparently sound health.

ARTICLE IV.

BLOOD-LETTING NOT NECESSARY IN PNEUMONIA.

By D. W. YOUNG, M.D., of Aurora, Ill.

An address read before the Aurora City Medical Association, at its annual meeting, Friday evening, January 12th, 1866, by the President of the Association.

Gentlemen of the Association:—Since you, at our last meeting, had the hardihood to impose upon me the task of writing something for the consideration of the Association this evening, I have determined to, in turn, impose upon your time by offering a few, perhaps illy-digested, reasons why I deem blood-letting not necessary in pneumonia. I shall not do so, however, expecting to answer fully the able paper and arguments presented at our last meeting, by my friend, Dr. S. R. Millard, favoring this remedy in this disease. Nevertheless, I deem it my duty to try and give reasons for the belief that is in me.

First. What is pneumonia? Is it a disease of function or structure, or both? All diseases consist in a change from the natural condition of the function or structure of the body. It is quite obvious, therefore, that we cannot obtain an accurate knowledge of the nature of disease until we have carefully studied the component parts of which it is made. As the anatomist or physiologist examines structures and functions by sep-

arating or analyzing them into their constituent parts before he enters on their contemplation as a whole, so must the pathologist carefully study and analyze the constituent parts or elements of disease, before he attempts to understand their combinations, consequences, or applies his remedies.

In pneumonia, we first have an intense injection of the capillaries of the lung. The blood is dammed up and the heart's action increased in consequence. The substances of the lung, the cells, and parenchyma are gorged with blood or bloody serum. The functions of respiration and circulation are impeded, accelerated, and otherwise changed from their normal standard. There is too much blood and not enough air in the lung, *without any actual disorganization.* The temperature of the body is exalted. The patient takes many forced inspirations, sighs, or gasps, and the breathing is quickened on the least exertion. The functions of the nervous system are also impaired, by reason of the defective oxygenation of the blood; the skin soon assumes a blue, unhealthy look, denoting that the aëration of the blood is imperfectly performed. The respiration is hurried and labored, with pain at each inspiration. The skin is dry and hot; pulse full and quick; bowels inclined to constipation; urine scanty and high-colored; some cough; slight expectoration, which is streaked with blood. There is intense congestion of the lung, which constitutes the first stage of the disease—the period of high febrile action.

If this engorged and congested condition be allowed to continue, the lung, after a time, undergoes further alterations. It still remains congested and red, externally and within; but it crepitates no longer under pressure; it now contains no air. The spongy character of the organ is lost; there is an interstitial deposit of lymph in the parietes of portions of the bronchial tubes and vesicles. The second stage of the disease, hepatization, is inaugurated, which, if permitted to remain and proceed, soon produces still further changes. The air-cells are obliterated; the aëration of the blood is still more improperly and imperfectly performed; the pulmonary circulation is, to a certain extent, arrested. The blood is changed; it no longer

passes freely and properly over the air-cells of the lung, to be exposed to the aërating action of the atmosphere. The hematoglobuline is changed, by reason of the defective oxygenation, and it is sent back through the systemic circulation, loaded with carbonic acid, and deficient in oxygen, and, as a consequence, the brain, nervous and muscular systems robbed of their accustomed and essential stimulus; the temperature of the body is lowered; the vital powers of the system reduced; the products of the inflammation changed from plastic to aplastic, and disorganization commences; the interstitial lymph gives place to a purulent fluid; and the third stage of the disease, gray hepatization or softening, is at hand. In relation to the causes of pneumonia, I shall offer nothing at this time, my only object in this paper, being to discuss the propriety of blood-letting as its remedy.

What are the indications for treatment in pneumonia? What the pathological condition to be remedied? In the first stage of the disease, we have an injection of the capillaries of the lung, soon followed by engorgement and infiltration of the cells and parenchyma. There is too much blood in the organ; as a consequence, respiration and pulmonary circulation are impeded. The question arises, What is the cause of there being too much blood in the lung? Is it because there is too much blood in the system? I apprehend not, as a general rule. On the contrary, we quite frequently meet with the most violent attacks in anæmic subjects—subjects who are deficient both in quantity and quality of blood. In these cases, at least, we must look for some other cause than the quantity of blood on hand. The object to be accomplished in this stage, is to unload the lung and its capillaries of the surplus blood; to equalize the circulation, and lessen the heart's action, in order that the blood shall not again be pumped back upon the lung with too much force.

Now, how are these very desirable objects to be attained? Dr. MILLARD says, by bleeding. I object. I contend that is too expensive to the constitution, *and unnecessary*. I hold that we are possessed of other means. ess expensive and equally

efficacious. Why is blood-letting expensive? What remote effect does the loss of blood produce upon the constitution? Does it lessen the quantity in circulation? Yes, but only for a short time. Does it change the quality of the blood? Yes, very materially. How, and why? Because we rob it of its red corpuscles, which are diminished in quantity by such means more rapidly than the other constituents. I hold that this is particularly deleterious and expensive to the constitution, because they constitute that portion of the blood that possesses the calorific and vivifying powers. They contain the globulin, hematin, and the principal portion of the phosphorus, fat, and potash salts, the material especially prepared by the blood-cells, and used so largely in the construction and nutrition of the nervous and muscular fabrics; robs the vital fluid of its nutrient and plastic materials; and, when we remember that the functions of the blood are, first, to maintain the activity of the nervous and muscular system, and, secondly, to supply the the materials for the molecular changes constantly going on in the tissues, we can readily understand why its withdrawal so frequently produces that peculiar condition of the brain and nervous system marked by great weakness and extreme irritability. Arterial blood is a powerful stimulant to the brain, while venous blood is equally as powerful a sedative. Hence, we can account for the convulsions in children sick with pneumonia, upon the theory that they are suffering from an overdose of a powerful sedative; so, also, upon the same theory, we must account for the extreme prostration that often ensues in adults sick with pneumonia. There is a lack of stimulation of the brain by oxygen. The blood in this disease is already deficient in quality, by reason of imperfect aëration—is at least five per cent. deficient in oxygen, in consequence of obstructed respiration and pulmonary circulation. Then, to take from it its globulin, hematin, and other nutrient materials by general blood-letting, certainly seems to me to be an illogical and an irrational procedure. Again, we all know that even if we do gain any advantage over the congestion by reducing the quantity of blood in circulation, it is but for a short time, for the

reason that the effects of blood-letting are not as lasting upon the quantity of blood in circulation as upon the quality. The quantity is soon made up by absorption from the watery portions of the tissues, so that the volume does not long remain diminished, and the heart soon has as large a quantity to propel, and the already weakened lung an inferior article to aërate, because it has been diluted by bleeding, and is, therefore, poorer, less nourishing, less stimulating, and less capable of sustaining the vital powers of life. This being the fact, *I say blood-letting in pneumonia is too expensive to the constitution, and the advantages gained over the disease are not equal to the waste.*

I am aware that in pneumonia the tendency towards degeneration is promoted by the disordered circulation in the lung. But is it claimed by its advocates that bleeding from the vein in the arm has any direct effect upon the coagulated extravasations and exudations of inflammation in the lung? I apprehend not. On the contrary, as I understand, the objects of the abstraction of blood by general blood-letting, are to ease the gorged capillaries of the inflamed organ by first reducing the quantity of blood in circulation, and, secondly, by lessening the heart's action. My proposition is, that the treatment should comprise the attempt to remove or counteract such local derangement, by the employment of such means as will not compromise the constitutional powers of the patient. Now, we know that bleeding does not always arrest the inflammatory action. On the contrary, there is great danger that it may continue, and even be increased and extended, in spite of the bleeding. In such cases, at least, there is great danger that the strength of the system will be so reduced as to prove unequal to the process of restoration; for, to remove the interstitial extravasation and to repair the damage that has occurred, a certain degree of vital power is requisite, together with a sufficient quantity of healthy blood.

Even when the bleeding does arrest the inflammatory action, it will not always cure the effects of the inflammation; it may be, and, in my opinion, is, liable to render them lingering in their departure, or even increase, and determine their fatality.

The subsequent debilitating effects of the loss of blood upon the system may be more certain and hurtful than the effects of the bleeding upon the local inflammation is beneficial. In selecting our remedies in the treatment of pneumonia, we should always bear in mind the fact that acute pneumonia, marked by no anomaly, complicated with no other malady, and occurring under ordinarily favorable circumstances, generally tends towards recovery, resolution, and a favorable issue. I say *generally*, but it does not always result thus favorably. In some cases, it assumes, from the very commencement, an adynamic or an otherwise unfavorable character, unwonted and accidental symptoms manifest themselves in its progress, owing to various contingent causes operating during its continuance, causes proper to the individual affected, or to a peculiarity of the nature and combination of the external agents which produce it. Age, sex, constitution, locality, epidemic influences, state of the season, atmosphere, or the epidemic constitution upon which it supervenes all tend to complicate and change the natural tendency of the disease. They should all be looked after and taken into account, before we apply or decide upon our remedy. *We must treat every case according to its own individuality.*

In no disease, perhaps, is this more clearly and impartially demanded, than in pneumonia. I say, then, it is especially important that we keep in mind, while prescribing in this disease, the fact that, in a majority of cases, the disease will get well in its own natural course, when not complicated. And, again, that it has two distinct periods, with distinct symptoms and indications of treatment—the period of congestion, high febrile action, and that of hepatization and disorganization.

If we had no recorded evidence, no statistics, no experience, nothing except general principles to fall back upon, even then, in my judgment, blood-letting could only be considered a logical remedy in the very commencement of a few exceptional cases, only admissible in certain sthenic cases and robust persons. But, most happily, we are not thus devoid of recorded evidence—statistical proofs against the use of the lancet in this disease. The French physicians, who bleed often and copiously

enough to satisfy the most bloodthirsty, lost a very large per cent. of their patients. Experience has proved, most undeniably, that even the entire expectant plan of treatment has saved a larger per cent. of patients than the most copious bleeders. Do not understand me, however, as arguing for, or adopting, the entire expectant plan of treatment—that is too extreme.

I would apply such measures as will *best assist nature*, without compromising the vital properties of the blood, or the strength of the patient. I would select my remedy with direct reference to indications of the case, and not because it is pneumonia. If I found quick, hurried, and labored breathing, full pulse, and other indications of congestion of the lung, I should at once attempt to counteract the difficulty. I should apply hot fomentations and counter-irritants to the chest and extremities, or even to the whole external surface, if necessary; I would invite the blood to the surface; I would, at the same time, administer such arterial sedatives as *are known to control the heart's action promptly*, without robbing the vital current of its nutrient elements. My experience is, that by reasonable energy and perseverence we can accomplish these desirable objects without much delay. Enveloping the chest with cotton batting, covered with oil-silk, has a fine influence upon the capillary circulation about the chest. When we have once controlled the heart's action, we can place a sentinel over the pulse *who can say with full confidence of being obeyed, so fast and no faster*, and if he perform his duties well and faithfully, we may confidently expect the patient to have a speedy convalescence, *because he has only to recover from the disease*, and not from what is often *harder, the bleeding.*

Perhaps, you will naturally inquire, with what particular article of the materia medica I propose to control the heart's action? I shall answer, with veratrum viride. I regard it as the most valuable arterial and nervous sedative at our command. I prefer it to the tartar emetic in pneumonia, because it is less violent in its action, and less exhausting to the constitution. It seems to be particularly adapted to the treatment of inflammation of the lungs. It controls the heart's action promptly,

and thus relieves the congestion, and, if resorted to early, will certainly obviate the use of the lancet. Nor need we be surprised at this, when we consider that veratrum viride affects the system, primarily, through the pneumogastric, and, secondarily, through the sympathetic nerves. Thus, we can easily and rationally account for its prompt action upon the heart, and general arterial system, and, through them, upon parts supplied by the solar plexus, while the brain remains but slightly, if at all, affected. In small doses, at long intervals, whereby the system is constantly stimulated to reaction, it is not cumulative, but exercises an undoubted eliminating and depurating influence over the blood and the glandular system, removing obstructions, abating congestions, relieving nervous irritation dependent thereon, and promoting the venous circulation. When we so gradually increase the dose as to control the action of the heart, but not to destroy the balance between the venous and arterial circulation, then it becomes a most valuable therapeutic in acute inflammations. This gradual controlling the heart's action is very important in pneumonia. When we recollect the valuable and interesting experiments of T. WHARTON JONES upon the tail of a tadpole, under the microscope, where he found that when the *vis a tergo* of an artery is suddenly diminished, congestion of the capillaries and venous radicals to which the artery leads is established, then we can appreciate the force of the proposition. Here is where I claim another advantage in favor of veratrum viride over blood-letting. In bringing the system so suddenly under the influence of the loss of blood, as is recommended, we arrest the *vis a tergo* of the arterial system, and the balance between the venous and arterial circulation is destroyed, and congestion of the capillaries and venous radicals of the lungs liable to ensue. The veratrum viride, at the same time that it controls the heart's action, also acts as a powerful diaphoretic, diuretic, and expectorant. Under its use we have profuse colliquative sweating, an increased secretion of bile, urine, and a copious exudation along the respiratory passages, all of which are especially calculated to unload the capillaries and venous radicals of their

surplus blood. But, in using this remedy, we should remember, while applying it in acute inflammations, our object is to prevent, rather than to promote, exudations; therefore, bringing the system under its influence gradually is the only way warranted by its physiological effects.

Finally, in conclusion, I desire to urge, that since blood-letting robs the blood of its vivifying and nutrient materials, by removing its red corpuscles, its globulin, hematin, phosphorus, fat, and potash salts, it compromises the constitutional powers of the patient; and, inasmuch as we possess other equally efficacious remedies, wherewith we can accomplish the same results equally quick, without thus robbing the vital current of its life-supporting properties, therefore, I say blood-letting, in uncomplicated cases of pneumonia, *is unnecessary, uncalled for, and can only be justifiable in very rare and extreme cases.*

ARTICLE V.

A PAPER ON OPIUM IN CERTAIN FORMS OF FEVER, AND IN DIARRHŒA AND DYSENTERY.

By S. B. HAWLEY, M.D., of Aurora, Ill.

Read before the Aurora City Medical Association, Dec. 1st, 1865.

My own experience has led me to believe that opium exercises a pernicious effect in certain forms or conditions of fever, and in a large number of cases of chronic diarrhœa and dysentery. The conditions of fever in which it has seemed to me to be a hurtful drug, are those denominated typhoid, and, particularly, that stage of fever marked by dryness of the mouth and fauces, constant thirst, and nervous, trembling motions of the muscular system. I am convinced that to give opium, or any of its preparations, when this condition exists, will increase the difficulty and prolong the time before convalescence.

This conviction rests upon personal observation of cases treated side by side, and consecutively with and without the use

of opiates; and, if my observations are not at fault, even the single sleeping powder given at bedtime delays the process of cure.

In chronic diarrhœa and dysentery, when the patient exhibits a tongue but slightly furred, characterized, rather, by a pale look and elongated state of the papillæ, with edges of the tongue red, has constant thirst, though the mouth may not appear dry when we see him, and some feeling as if bloated, I have never seen any, to me, satisfactory result follow the use of opiates.

In the summer of 1863, while I was on duty with my regiment, the 35th Ill., near Murfreesboro, Tenn., the dysentery prevailed extensively in our camps, and opium still held a prominent place in my mind as a suitable remedy in that disease. I shall, therefore, relate a case that occurred under my treatment and observation that season, and which is but one of very many similar cases that I could relate, bearing on the point I wish to elucidate:—

Private M., of Co. H., 35th Ill., applied to me for relief, on account of dysentery, about April 3d. I prescribed oleum ricini, ℥ss, tr. opii, ℥j, at once, and pulvis Doveri, grs. xx, ft. ch. No. iv., one to be taken each night and morning, and excuse from duty two days, at the end of which time he went on duty, thinking his trouble cured. But, in about two weeks, he reported, as bad as at the first. I then directed him to have:—

℞. Pill Hy., ---------- grs. x.
Opii, ---------- grs. vj.
Qui. S., ---------- grs. v.

Ft. Pills No. viij. To take one every four hours, and moved off with oleum ricini.

The second day after, I put him upon pills of quinine and opium, āā grs. j., to take one such three times a-day, for three days, and then grain pills of opium twice a-day for several days. This treatment produced considerable relief, so that he again went on duty for a time, but still reported at sick call every few days, saying that he was not quite cured.

In May, Dr. T., who had been for many months on duty in

the hospitals of Rolla and Louisville, joined the regiment, and I asked him to take charge of M.'s case. He did so, and prescribed with some seeming temporary benefit, but still the disease ran on. I observed his prescriptions far enough to know that opium formed a principal part of most of them.

About one month later, Dr. J. D. W. came on duty with the regiment, and I placed M. under his care, as he was still declining in general strength, and having four or five dysenteric discharges each day. He remained under his care till about the middle of July, taking opium and astringents, more or less, most of the time.

Up to this time, he had declined steadily, and then presented the following symptoms:—tongue covered with whitish, swollen papillæ, the posterior half a yellowish-white, smooth fur, the front showing the papillæ distinctly; he had little appetite; tumid abdomen; constant thirst, though the mouth appeared not very dry upon inspection. He was able to walk about the camp, and had about half a dozen stools a-day, one or two like a watery diarrhœa, and the balance mucus with an occasional tinge of blood.

He had often been carefully questioned, as to any chill, and had taken considerable quinine, under the belief that malaria was keeping up the disease; and some relief had seemed to result from time to time from the use of this remedy, but not lasting, and no chill had been clearly made out to exist. I, therefore, determined to try a, to me, new treatment in his case, though I confess that at the time he seemed too much reduced for the course of treatment which the event proved quite *apropos* to his case. I gave him sulph. magnesia, ℥ss., tartar emetic, grs. ss., quinine S. grs. v. at once, about 8 o'clock A.M. At 1 o'clock P.M., it not having moved the bowels at all freely, I repeated the dose which produced copious stools. That night he reported a more comfortable night's rest than he had had for three months, and for two days he had a better appetite, and there was some cleaning of the tongue; the papillæ approached their natural color; the bloat began to subside; and he showed a more cheerful aspect.

On the third day, there was some return of the old symptoms when I repeated the above prescription, and I gave directions to repeat it, less the tartar emetic, every other day for ten days. From this period he steadily convalesced, and was able to go through the terrible work of Chickamauga and Chattanooga that fall.

Many cases might be added to the point of laying aside opium and all astringents in these cases, but I shall proceed to show the rationale of my conclusions:—

"Opium," says Dr. WOOD, "is a stimulant narcotic. Taken by a healthy person, in a moderate dose, it increases the force, fulness, and frequency of the pulse, augments the temperature of the skin, invigorates the muscular system, quickens the senses, animates the spirits, and gives new energy to the intellectual faculties. Its operation, while thus extending to all parts of the system, is directed with peculiar force to the brain, the functions of which it excites sometimes even to intoxications or delirium. In a short time this excitation subsides, a calmness of the corporeal functions succeeds, and at the end of half an hour or hour from the administration of the narcotic all consciousness is lost in sleep. The soporific effect having continued for eight or ten hours, goes off, and is generally succeeded by more or less *nausea, headache, tremors, and other symptoms of diminished or irregular nervous action.* All secretions, with the exception of that from the skin, are either suspended or diminished, and the peristaltic motion of the bowels is lessened. When larger doses are taken, the period of excitement and exhilaration is shorter, the soporific and anodyne effects are more intense and of longer duration, and the succeeding symptoms of debility are more obvious and alarming."

The strong language he uses, in setting forth these final effects of opium, is almost identical with that used by STILLE, PEREIRA, CHRISTISON, ORFILA, and COPELAND in the same connection, and was, I think, intended to put us on our guard against its use in many cases where we have been accustomed to think it harmless, if not useful. The great comfort which an anodyne brings to a nervous patient, suffering moderate pain,

with uneasy and sympathetic nurses, has often, I think, led us to the use of this drug, when we had no good therapeutic reason for so doing, and, also, when there existed the best of reasons why we should not give it.

In typhoid, typhus, and bilious fevers, the secretions are usually nearly all locked up, as shown by the dry tongue, continued thirst, and diminished flow of urine, while water drank in the usual mode is not absorbed, as is natural, by the stomach, but flows on through the bowels and passes off in a diarrhœa. Why give a medicine that lessens the peristaltic action and dries up all the secretions, save that from the skin, when the disease produces the above set of symptoms? Do we believe in *similia similibus curantur* in these diseases? Or can we, as the Dover's powder propose, blow hot and cold in the same breath? I doubt it.

I would not be understood to urge the entire abandoning of opiates in these diseases, for, at times, we will find patients suffering under a degree of pain that must be relieved before anything else can be done. But I believe if we could discover the absolute status of these cases, we should find that every moment we continued the use of opiates in these diseases beyond the time required to relieve unendurable pain, prolongs the time before convalescence. And this, I believe, I have shown upon philosophical grounds, that is, that the opiate naturally increases the very condition we have to meet.

Likewise, in chronic diarrhœa and dysentery, when a dry mouth, constant thirst, and scanty urine, shows the natural secretions all deficient, it seems to me that opium, or any astringent, is most unphilosophical, though they may lessen the number of stools. What element of our systems does opium supply, that shall in any degree compensate for the fact that it produces nausea, headache, tremors, and other symptoms of nervous debility, while it dries up all the secretions? Are there not many and good reasons for believing that the torpor which it produces stops the very process by which nature is at work to remove the cause of the disease.

I make no attempt to exhaust this topic, but hope to place

clearly before your minds this, to me, glaring inconsistency of practice which has so long prevailed among physicians.

ARTICLE VI.

DR. C. F. TAYLOR'S SPINAL APPARATUS.

To N. S. DAVIS, M.D., *Editor Chicago Med. Examiner.*

DEAR SIR:—In the paper on Orthopædic Surgery, by Dr. DAVID PRINCE, of Jacksonville, Ill., which appeared in the August number of your journal, the doctor, in alluding to the instrument used by Dr. CHARLES F. TAYLOR, of this city, for the treatment of Pott's Disease of the Spine, says:—

"The hinges in Dr. Taylor's apparatus must certainly be useless complications of machinery, for the very object of the apparatus is to obviate movements of the vertebræ upon each other, and not to make special provision for motion. The elasticity of the material affords all the motion which should be permitted."

Dr. PRINCE cannot have a right conception of the form and uses of the instrument, or he would never have made such a statement. He seems to think that the hinges allow of motion forward, in which case they would certainly be worse than useless bits of mechanism. If he will look on page 26 of "The Mechanical Treatment of Angular Curvature," he will learn that they are "stop hinges in front, but free to bend backwarks, and allow the most unrestrained use of the muscles of the back," but *only in one direction*, namely, *backwards*, "thus stimulating and encouraging muscular action, as the patient, when free to do so, involuntarily makes frequent efforts to gain momentary relief from the instrument, by attempting to straighten himself up. Indeed, the spinal muscles, by alternate action and rest, actually alternate with the instrument, in sustaining the weight of the body and overcoming the curvature."

"It has proved to be useful in causing the development of the spinal muscles, instead of binding them up and causing their

atrophy, as results from the use of instruments which prevent muscular action."

But besides *preventing* motion forward, the hinges are of great advantage in another way. By referring to page 29 of Dr. Taylor's monograph before mentioned, we learn that:—"There are also little screws by which the hinges are forced open and the form of the instrument made straighter or more bent, as the case may be; thus increasing or diminishing the sustaining force at will."

Thus it will be seen that the hinges are used to *prevent* the motion which the "elasticity of the material" is sure to afford to the "vertebræ (*forward* by the weight of the body) *upon* each other," and that the only motion possible in Dr. Taylor's appliance (*backward*) is that which diminishes the pressure, by tending to bring the vertebræ *away* from each other.

During the past two years, I have enjoyed the opportunity of seeing quite a number of cases under treatment by Dr. Taylor's method, and have been struck by the simplicity and effectiveness of the instrument employed by him, and also by its easy adjustability and adaptation to the requirements of every case, and this knowledge of its superiority over every other that I have ever seen, has induced me to correct the erroneous views entertained by Dr. PRINCE regarding this very useful surgical appliance.

Very respectfully,

F. O. EARLE, M.D.,

New York, Dec. 28th, 1865. 75 *West 26th St.*

ARTICLE VII.

LAUGHING IN LARYNGOSCOPY, AND A NEW MODE OF APPLYING SOLUTIONS TO THE LARYNX.

BY H. A. JOHNSON, M.D., of Chicago, Ill.

In using the laryngoscope, every one, I presume, occasionally meets with a case in which there is extreme difficulty in getting a view of the glottis and vocal cords. After using all ordinary

means, I have sometimes been able to succeed by requesting the patient to laugh.

The process of laughing, not well described in most works on physiology, consists in a forcible expulsion of air, interrupted by a rapid alternation of approximation and separation of the vocal cords. The glottis is, at the same time, elevated and the pharynx widely opened. The movements, it is true, are rapid, but do not prevent the observation of the color, form, and physiological action of the parts. This method, I believe, is new, and, in some cases, valuable.

In the application of solutions to the vocal cords and interior of the larynx, advantage may sometimes be taken of the laryngeal mirror to accomplish the result.

If a jet from the syringe be thrown directly in the line of vision upon the mirror while the structures below are in sight, the reflected spray will be carried directly down upon the parts observed.

If the jet be thrown at the commencement of inspiration, it will reach the interior of the larynx below the true cords. The result is an almost immediate closure of these cords, but I have been able to see the solution falling upon their upper surface, while the expired air passed up in bubbles between them. It is well, as in other cases, to request the patient to sound the note *ah!* during the process.

I do not suggest this mode as applicable in all cases. The brush, or even a direct jet from the curved nozzle of a syringe, may often be more desirable. By the brush, especially, the extent of the application may be limited to the diseased parts,

611 *Wabash Avenue, Jan.* 21*st*, 1866.

Correspondence.

To Dr. N. S. Davis, *Ed. Chicago Med. Examiner:*

Dear Sir:—Upon the subject of ventilation, there is evidence that the world moves. The problem has been, how to

secure the comfort of a home with the purity of outdoor air. It has been supposed that this was the utmost possible attainment. More than this has been achieved. It has been found practicable to make an artificial mountain air without its rarity.

Mr. A. S. LYMAN, a noted *inventor*, has, through 20 years of study and experiment, finally perfected an arrangement of chemical agents, so as to deprive the air of all its impurities and make it equal to that found above the influence of emanations from the surface of the earth.

The expedient consists in passing air over unslaked lime, which absorbs carbonic acid and some water and organic impurities, and elevates its temperature, giving it a tendency to rise. It then passes through fresh-burned charcoal, losing most of the impurities which the lime had not taken up. The purified air then ascends to the top of the apparatus, and, turning to descend, it passes over ice, which cools it and accelerates the current, which next passes out through orifices in which the current is divided up by wire screens, so as not to blow in one compact current. This apparatus is the head of a bed, or the back part of a desk or bookcase, or, on a larger scale, it is a part of a system of ventilation of a whole house.

When the apparatus is part of a bed, the sides of the bed are made high enough, either by curtains or the arrangement of the wooden framework, so that the cooled and purified air flowing in, at the head of the bed, does not flow immediately off upon the floor, but accumulates upon the patient or sleeper, covering and immersing him thus in a bath of cool pure air.

For the greatest benefit of this expedient, when applied to a desk, there should be a tight enclosure for the reader or writer to sit in, which becomes filled higher than the top of his head, so that, in the impure air of a city in a hot summer's day, he may sit in and breathe a chemically pure atmosphere, reduced to a temperature compatible with vigorous mental activity.

Other substances may be used for the purpose of taking impurities out of the air, but Mr. LYMAN, from numerous trials, has come to prefer fresh-burned lime, fresh-heated charcoal, and ice. In winter time, the ice is a less essential part of the

ingredients, but in hot weather, the cooling of the air is a source of health and comfort which all can appreciate.

The principle of purification applies to the air of marshy regions occasioning ague, to general impurities of air, arising from all the innumerable kinds of decomposition in cities, favoring whatever epidemic may be impending, whether erysipelas, cholera, or dysentery, and to the air of crowded rooms, and the wards of hospitals generating typhus and typhoid fevers and imparting to wounds erysipelas, diffuse suppuration, and gan grene, and where the bone is involved in injury, ostitis and osteomyelitis; generally contaminating the blood with the poison absorbed with decomposing fluids, and involving the whole system in the low fever of pyæmia.

The infection of air contaminated with the decomposing organic exhalations from the lungs, or from pus and blood in a state of decomposition, is no less destructive to puerperal women who are very much in the condition of persons recently wounded, and who are subject to the same accidents of local and general poisoning through the contact of decomposing fluids and of air loaded with fœtid gases and floating cells and scales, ready, like spores, to produce their like wherever they may alight.

The device of Mr. LYMAN secures for patients a pure air to breathe, and in which to lie, but another *desideratum*, not yet fully realized, is an arrangement by which the expired air and other emanations of patients with infectious diseases shall be carried directly away without contaminating the air of the room in which they lie, thus affording protection to physicians and nurses who must sit or move about in the room.

It will be gratifying to the medical profession and to all philanthropists to know that Mr. LYMAN proposes to make his invention free of any charge for patent right to hospitals maintained for the benefit of the poor.

Some beds with the purifying attachment have been in operation, during the winter, at Bellevue Hospital, to the very great satisfaction of those who have watched the progress of the cases submitted to the influence of the purified air.

It is an old story in hot weather, in the progress of an epidemic, "If the weather would only change—if the wind would only blow from the North-west, we should have an improvement in the patients." It will certainly be a boon to mankind, and especially to all sick persons, to have the means of changing the weather, and, for the space of a few feet, of producing a North-west wind, as pure and as bracing as any that was ever manufactured in the laboratory of the heavens.

A new era in hospital construction will have dawned, when plans shall have been adopted to give them a purer atmosphere than exists in the free breezes outside. That this has been the desire of all who have investigated the subject, any one can see who reads a few pages, at random, upon what has been written upon hygiene during the last twenty years. I cannot do better than to quote a paragraph from Dr. KRACKOWIZER, from the *Bulletin of the New York Academy of Medicine*, vol. ii., 1865, p. 438.

"If, then, physicians look with a certain awe and resignation upon the ravages of pyæmia, it is not because they know less of its causes and of its nature than of other diseases, but because they see plainly how the cause might be removed, yet, under certain circumstances, are denied the means to prevent the disease.

"It is bad enough that the surgeon and the obstetrician find inherent difficulties in the treatment of wounds, in the management of abnormal labor, that they cannot help sometimes making mistakes in choosing the times for operations and in performing them; but it is discouraging to have to take an element into the calculation, in performing one's professional duty, that neither lies in the nature of the case, nor can be warded off by any degree of scientific acumen or professional skill.

"The preventive hygienic treatment goes before everything. If the sums spent all over the world for every sort of medicine in healing pyæmia—quinia included—could be accumulated in a fund wherewith to build a hospital in some part of the world, so perfect in its hygienic arrangements that pyæmia in it would be impossible, more would be done for diminishing its ravages,

than by all the attempts to heal patients when they once are its victims."

Dr. KRACKOWIZER truly says, "the *preventive* hygienic treatment goes before everything." According to Dr. HAMMOND (in his *Military Hygiene*, p. 426,) the amount of carbonic acid in the military hospitals which were found in the best condition was considerably above that in the outdoor air. While outside there was $\frac{37}{100}$ of a part in 1000 parts, there was in those in which there was the least attention paid to ventilation, $2\frac{11}{100}$ parts by volume in 1000 volumes of air.

LEBLANC found in one of the wards of the Salpetriere, 8 parts of carbonic acid in 1000 by weight, or $5\frac{33}{100}$ by volume, in 1000 volumes.

Dr. HAMMOND expresses the opinion, that 10 parts of carbonic acid in 1000 volumes of air, renders it altogether unfit for respiration, and that a smaller amount must be unhealthy in proportion. But it is probable that the organic material proceeding from the lungs and cutaneous surface is far more injurious than carbonic acid. Quoting from *Hammond's Hygiene*, p. 168:—"When we enter a room in which many persons are contained, we are struck at once by the oppressive character of the air. That this is not altogether due to the presence of carbonic acid, is very apparent from the peculiar odor evolved. The same is true of a chamber in which one has slept, and which has not yet been purified by ventilation; or of a bed which has been lain in."

At St. Cloud, it was noticed, a few years ago, that there was an annual visitation of typhoid fever in connexion with doubling the number of soldiers in the barracks, on the annual visits of the King. (*Hammond's Hygiene*, p. 428.) Medical literature is full of such instances of the origin of disease in overcrowding, especially in court-rooms, when constructed, as they formerly were, without any reference to the necessity for fresh air to breathe.

It may not be always practicable to have the freedom of outdoor air, but it is now practicable for all sleepers, sick or well,

in hospitals or private dwellings, to have air that is as good as outdoor air, and sometimes a great deal better.

Yours, Respectfully,
DAVID PRINCE.

21 *W. 12th St., New York, Jan.* 26.

NOTE.—A good description of Mr. LYMAN's apparatus may be found in the *Scientific American* for Dec. 9th, 1865.

Selections.

PERISCOPE OF MEDICAL AND GENERAL SCIENCE IN THEIR RELATIONS TO DENTISTRY.

BY GEO. J. ZIEGLER, M.D.

Reflex Action. By C. HANDFIELD JONES, M.B., F.R.C.P., F.R.S., Physician to St. Mary's Hospital, and Lecturer on Medicine.—"The chief question with regard to reflex or inhibitory paralysis is, does it depend on an influence exerted on the tissue of the nervous centres, or on excitation of the vaso-motor nerves of their bloodvessels, by which the latter are thrown into a state of anæmiating spasm? The latter is the view maintained by Brown-Séquard. It has in its favor the possibility of explaining on known grounds the occurrence of the paralysis; but against it there are considerations which seem to me greatly to preponderate. It is difficult to conceive that a spasm of remote origin should be limited to such a very small extent of vessels as would be contracted in some instances—*e.g.*, palsy of one-sixth nerve, ptosis of one eyelid. Spasms produced by reflex excitation tend mostly to assume a diffuse character. It is almost impossible to believe that a spasm of vessels should be so persistent as the hypothesis requires. In some instances, it would be necessary to suppose that the anæmiating spasm had continued for weeks or months. Moreover, we know from the results of embolism that any arterial obstruction continued above a few days in the brain is followed by degeneration and decay of the tissue. This would certainly have occurred in some of the cases which were of long standing, if the palsy had depended on anæmia of the nervous tissue. Now, even supposing the excitation to remain in operation all the time, there is

no doubt that the muscular contractility would, sooner or later, become exhausted, and the contraction therefore gives way to dilatation. Bernard says expressly that reflex actions of the vaso-motor nerves are manifested by contraction of the vessels, followed by dilatation. Besides, on Brown-Séquard's view, the cessation of the irritation ought always to be followed speedily by cessation of the paralysis, the vessels again admitting blood into the previously anæmic part; whereas, we know that, in many cases, the paralysis continues long, or even does not come on at all, until after the irritation has ceased to act. Not only so, but a curative effect is sometimes produced by a stimulation of a different kind, as the interrupted current, which would tend to contract vessels. Again, if it be admitted that a nervous centre may be functionally paralysed from such causes as catarrh, overexertion, insolation, etc., a considerable argument is supplied for the view that a similar state may be induced also in a reflex manner. If, as I shall presently show, neuralgic pain is to be regarded as a condition akin to paralysis, we have, in the very frequent instances of reflected pains we meet with, examples of morbid action closely allied to inhibitory. In these, however, it can hardly be thought that the nervous centre affected by the primary irritation is necessarily anæmic. Moreover, it may be remarked that the same cause which gives rise to inhibitory paralysis may also produce very different effects, as tetanic spasm, which certainly does not depend on an anæmic state of the centre.

"Assuming, then, that in reflex or inhibitory paralysis, both in its more and less typical forms, the essential change is in the cells of the nervous tissue itself, and not in the vessels, we will proceed to consider some other instances of this kind of disorder. Dr. Watson refers to the production of amaurosis without visible change in the eye, in consequence, apparently, of irritation of the dental nerves, the blindness ceasing after the extraction of some teeth which had grown irregularly. He quotes from Mr. Laurence an interesting case, in which the extraction of a carious tooth, with a splinter of wood projecting from one of its fangs, procured the restoration of the sight of the eye on the same side, which had been entirely lost for thirteen months. Improvement in vision commenced immediately, and recovery was perfect by the ninth day. It is impossible that the complete amaurosis in this case could have been due to retinitis, as this would have certainly taken a much longer time to subside, and would, assuredly, after lasting so long, have left behind irreparable damage. It is worth remarking for

future reference as to the nature of neuralgia, that the amaurosis was attended with severe pain in the same side of the head and face. This I interpret as another paralytic phenomenon. Deafness is certainly a rarer result of inhibitory irritation than amaurosis, but the following case appears to be an example of it. It is related by M. Vautier, '*Ann. par Jamain*,' 1861, p. 90:—A lady, aged 54, spare and of a nervous temperament, was attacked, about four months before he saw her, with pain radiating into almost all the teeth, as well as into the muscles of the anterior and left side of the head. The eye of this side was in an almost constant state of lachrymation, and she had become completely deaf of this ear. She was sleepless and without appetite. After the extraction of the left wisdom tooth, which was a little loose and painful, the deafness immediately ceased, and the neuralgia disappeared. The rapidity of the change proves, I think, that the deafness was not the result of inflammation or any structural change in any part of the organ, but a nerve-disorder homologous to the existing neuralgia. It appears to me somewhat remarkable that, while reflected pains are so abundantly common, anæsthesia or numbness of like origin is decidedly rare. Both in the more acute and chronic forms of paraplegia produced by cold and wet, Graves states that there is much less impairment of sensation than of motion, and the loss of sensation is never so complete as in paraplegia from disease of the spine. The much greater tendency to impairment of motor than of sensory power in almost all kinds of nervous diseases, organic as well as inorganic, is a remarkable and unexplained fact. Schuh observes that motor nerves require for the exercise of their function a much greater perfection of structure than sensory do, and the restoration of the integrity of the nerve is less easily affected.

"Morbid impressions conveyed from the internal organs are well known to produce depressing effects on the nervous system, just as *per contra* impressions of an opposite kind are attended with a sense of satisfaction and 'wohlsein.' It is known to physiologists that the cravings of an empty stomach are much better appeased when some solid, though innutritious material, as earth or sawdust, is mixed with the liquid oil or honey on which some savage tribes are at times reduced to feed, than when the latter are taken alone. On the same ground, the Canadian 'voyageurs' tighten their famine girdles to the last holes when the vacuum so abhorrent to nature generally is felt and there is nothing to fill it. In a case under my own care, sensory paralysis was the result of gastric irritation. A female,

aged 32, had been ailing a long while. She suffered with stomach disorder of sub-inflammatory character, marked by anorexia, pain after food, and vomiting directly after eating. There was also severe headache, extending from the forehead to the back of the head, constant and not affected by position. Attacks occurred two or three times a week, or oftener, in which the left side of the face, and tongue, and left arm became numb, the numbness beginning in the tips of the fingers, and extending upwards to the face, lips, and tongue. At these times, her speech became thick, and continued so for an hour. Under treatment, directed to relieve the inflammatory condition of the stomach, the reflected disorder diminished considerably. The numbness of the thigh, which occurs in some cases during the descent of a calculus from the kidney to the bladder, is another instance of inhibitory anæsthesia.

"More frequent than disorders of the sensory nerves, are those where the intellectual centres are affected. Mr. Langston Parker says, 'In some persons, where the powers of the mind are naturally acute, they are singularly depressed after a full meal; some lose the faculty of thinking at all, others become deficient in judgment, and in others, again, memory is quite lost.' I was called to the case of a gentleman, in the course of last year, who was suffering from a sub-acute inflammatory affection of the stomach, who completely lost the faculty of memory after taking a teacupful of food, yet this patient was remarkable for his mechanical genius. A less portion of food did not impair his mind, which invariably became more powerful and clear from leeching or fomenting the epigastrium. Mr. Grantham relates a case (*Brit. Med. Jour.* June 7, 1862,) in which a man, aged 48, who died with symptoms apparently of cancer of the stomach, had been subject to paroxysms of violence, both mental and bodily, occurring more or less after dinner and supper. These exacerbations had gradually increased in severity from the commencement. The following case has been kindly communicated to me by Dr. Palmer:—Mrs. H., aged 50, has had a large family; still menstruates occasionally. Is temperate and regular in her habits, taking only two or three glasses of ale daily. Is subject to tremor of hands and tongue when fatigued or excited at any time; is rather dyspeptic. October 28th, complained of pain of back, and sleeplessness, and general debility, but appeared perfectly rational, saying that the cause of her not sleeping was that some actors had been sitting up late in the next house, singing and making a noise. I really thought it was true, until her children assured

me it was a delusion. As usual, when anything ails her, she is in a tremor all over; tongue clean, pulse weak, but not hurried, skin perspiring, bowels well open. Complains of pain and fulness of right side in region of liver, which she says feels swollen; the extent of dulness has increased. Is quite cheerful and happy. No cause for this attack discoverable. Ordered full stimulating diet and tr. opii min. xv 3tis hôris. Next day, pain of back was gone; other symptoms were worse; she was weaker and sick; saw cats, dogs, fires, etc. Still answers questions apart from the delusions quite rationally. Still smiling and merry. Not an hour's sleep last night. It was determined to try the plan fully, so the doses were doubled. Next day, gets worse and worse; has more delusion, but is as happy as ever. Next day, condition same; rather more pain in right side. The plan was now changed, her meat and stimulus were discontinued, and three grains of calomel were given. In three or four hours after taking the pill the delusions began to abate; three or four hours later, the bowels acted freely (they had been confined for three days before); very soon after she fell asleep, and slept for six hours continuously, having had, practically, no sleep for five nights. On awaking, the delusions were all but gone, and she speedily got quite well. In this instance, the depressing and disordering influence of the loaded state of the liver and bowels on the hemispherical ganglia is plainly apparent. The disorder was of the nature of a paresis, but cannot be attributed to anæmia of the centres. Dr. Tilbury Fox records a case in which symptoms identical with those of delirium tremens were brought on by exposure to cold and wet. The patient was a perfectly temperate man, aged 45, but he seems to have had an hereditary predisposition to cerebral disorder. Here, also, the nervous disorder was evidently of paralytic character, the functional power of the brain was evidently impaired, and the same is true of the following instance: A lady, who had been a very excellent and affectionate mother, displayed unequivocal symptoms of moral insanity. She continued in this state some time, and was at length restored by having a great number of stumps of decayed teeth extracted, which, however, did not seem to have caused any marked pain. In his excellent paper on symptomatology of worms, Dr. Heslop describes headache and giddiness as prominent symptoms. The headache is almost constant, and sufficiently severe, without being excruciating, to render life, if not a burden, at least unhappy. The giddiness is so severe that the patient often staggers about like one intoxicated, and when this symptom is

present to a less degree, there is still almost continuously a sense of confusion and insecurity, which renders walking a serious effort. Both these symptoms indicate, plainly, a state of depression, of partial paresis, of some of the encephalic centres. The influence exerted by the uterus on the nervous centres, even on those of the highest order, is very considerable, and, from the great variety of effects produced, demands specially to be noticed here. In some cases, the gravid condition of the organ evidently causes derangement and depression of one or more parts of the nervous system. Thus, it may produce severe frontal neuralgia, gastric hyperæsthesia of the most intense kind, chorea, hemiplegia, paraplegia, deafness, amaurosis, or a state of complete cerebral torpor in which the patient appears like a living automaton, and all indications of mind are in abeyance, or insanity. Instances of all these various forms of disorder are given by Dr. Lever, in his paper in 'Guy's Hospital Reports,' vol. v., 1847. The histories of several of the cases seem to make it highly improbable that the manifold symptoms could depend on anæmia of the nervous centres produced by arterial spasm. This conclusion is strongly supported by the fact that the same condition sometimes acts as a beneficial stimulus, improving a naturally irritable temper, and invigorating general or particular nutritive actions. Dr. Churchill states that pregnancy occasionally relieves mental derangement, and mentions having seen a lady who was in a state of confirmed melancholia, which disappeared entirely on her becoming pregnant. Asthma sometimes disappears during pregnancy, and digestion is occasionally more vigorous then than in the unimpregnated condition. I am acquainted with one remarkable case in which albuminaria, which had existed for at least fifteen months before pregnancy, ceased during its continuance, at the same time that the health improved and the body gained flesh, which had been observed in former pregnancies. Here, there can be no question that a beneficial influence was exerted on the renal plexus—an event which is more remarkable as the exact converse is the more ordinary occurrence."—*Med. Times & Gazette, and Dental Cosmos.*

The Sale of Poisons in Bombay.—A new Bill has been introduced into the Legislative Council of Bombay, to regulate and restrict the sale of poisons in the Presidency, in assimilation to the English Acts.—*London Lancet.*

ON FACIAL HEMIPLEGIA AND PARALYSIS OF THE FACIAL NERVE.

By WM. R. SAUNDERS, M.D., F.R.C.P.Ed., Physician to the Royal Infirmary of Edinburgh, and Lecturer on Physiology and on Clinical Medicine.

Centric and facial peripheral paralysis.—Dr. Todd's views.—Objections critical and clinical.

Since the discoveries of Bell, it has been well known that paralysis of the fascial muscles may be produced by one or two causes. Either the palsy is due to a cerebral lesion (cerebral or centric fascial hemiplegia,) in which case it is usually accompanied by hemiplegia of the limbs on the same side; or, occurring independently of cerebral disease, it is owing simply to lesion of the trunk or branches of the portio dura at some part of its course (peripheral facial hemiplegia, paralysis of the facial nerve, Bell's paralysis). These two kinds of facial palsy present many points of resemblance and of contrast, which are of considerable interest and importance. My present purpose is —1st, to direct attention to certain views in regard to them, which, although held upon high authority, seem to me to be erroneous; and 2d, to endeavor to explain some difficulties which have not yet received a satisfactory solution.

I. The opinions I refer to, which I believe to be mistaken, assert that in facial hemiplegia due to a cerebral lesion, the nerve which is usually paralysed is not the facial of the seventh pair, as many believe, but, on the contrary, is the motor portion of the fifth pair. This doctrine was long ago maintained by Mr. John Shaw, brother-in-law of Sir Charles Bell; but it has been principally brought into notice and powerfully enforced in recent times by the late distinguished physiologist and physician, Dr. Todd in his Clinical Lectures on Nervous Diseases. Supported by his eminent authority, this peculiar view has been widely accepted in England, and has been latterly put forward as an established truth in our best text-books on the Practice of Medicine—*e.g.*, those of Dr. Watson and Dr. Aitken.* The subject is of sufficient importance to deserve investigation; and after careful examination of it, I am unable to consent to Dr. Todd's opinion. On the contrary, it appears to me that his peculiar views can be disproved, and the source of their error discovered, by an examination of Dr. Todd's own statements, and by investigating the facts supplied by clinical observation.

* Also, Tanner, "Practice of Medicine," Fifth Edition, published since this paper was written.

Examination of Dr. Todd's statements.—The symptoms of fascial palsy due to lesion of the seventh pair are too well known to need recapitulation. It will be sufficient to quote Dr. Todd's description of the phenomena of facial hemiplegia from cerebral disease, as distinguished from these of peripheral paralysis of the portio dura, in order fully to represent the principal facts, as well as his peculiar views on the subject. In his forty-first lecture, on Hemiplegia, p. 709 (second edition, by Beale), he says:—

"It is very necessary that you should be well impressed with the characters of facial palsy which accompanies hemiplegia, and that you should be able readily to distinguish it from that which arises from affection of the portio dura. Place the patient well opposite to you, and observe the condition of the face as it is perfectly quiescent. You will observe that *the paralysed cheek hangs*, and that the *angle of the mouth* on that side is *lower* than its fellow; the *cheek* is more or less *loose* and *flaccid*, in proportion as the paralysis is more or less perfect. If now you ask him to smile or speak, *the want of equilibrium of the face* becomes very apparent. The healthy muscles, being relieved of the antagonism of the paralysed ones, contract to a much greater extent than is natural; while the *palsied cheek remains quiescent*, or allows itself to be *drawn* slightly towards the mesial line.

He then alludes to the distortion of the features as observed by the patient or his friends and continues:—

"But, with all this, the patient can *shut both eyes well and open them*, and he can *move the cheek* so far as can be effected by the zygomatic muscles, and he makes a very fair *attempt* at pursing up the mouth for whistling; the last act, however, being *rather impaired* by the intimate connection of the buccinator with the orbicular muscle of the mouth. The *muscles of mastication* on the paralysed side act with *less power*, although *it seldom happens* in hemiplegia that their power is completely *destroyed. Doubtless much of this action is reflex*, and this explains the fact that *while the buccinator is very much paralysed and even wasted, the masseter and other masticatory muscles retain a considerable amount of power.*"

The conclusions which Dr. Todd arrives at from an examination of the symptoms described are thus given:—

"Your anatomical knowledge will explain all this to you: *the fifth nerve is more or less involved in, or influenced by, the paralysing lesion.*" And further on: "*The facial nerve, or portio dura, is not generally touched by the paralysing lesion in*

hemiplegia," although in a few cases "the muscles were weakened, as if the nerve participated slightly in the shock------In a physiological point of view," he adds afterwards "it is a very interesting inquiry how it happens that the fifth and ninth nerves are so frequently—nay, almost universally—paralysed in hemiplegia, while the portio dura escapes."—p. 711.

Notwithstanding the positive and decided terms in which Dr. Todd announces these conclusions, it appears to me that no physiologist or physician can read his description, just quoted, of the symptoms of facial hemiplegia, without perceiving plainly that, instead of supporting, they are opposed to the interpretation he puts upon them. For—

1st. Amongst the symptoms described, those of paralysis of the muscles supplied by the portio dura of the seventh pair are undoubtedly present.

It is anatomically impossible that the *hanging of the paralysed cheek, depression of the angle of the mouth, distortion of the features, exaggerated when the patient speaks or smiles*, could be produced by paralysis of the muscles of mastication, which are alone supplied by the fifth pair. These are symptoms of inaction of the facial muscles of expression, and necessarily imply paralysis of the nerve which supplies them with motion—viz., the seventh pair, and no other. On this point there is no room for doubt. It will be observed that Dr. Todd makes the qualifying statement, that the patient can move the cheek so far as can be effected by the zygomatic muscles, and can make an attempt at pursing up the mouth for whistling. But it is well known that in cerebral hemiplegia, the paralysis is seldom so complete as to prevent all movement in the parts affected; and further, we cannot conceive the action of the zygomatics to have been very apparent when the *cheek hung loose*, and remained *quiescent when the patient smiled.* The attempt at pursing the lips for whistling is also noted as "impaired,"—the impairment being ascribed, it should be remarked, to the connexion of the *buccinator* with the orbicular muscles of the mouth. The nature and extent of the paralysis of the buccinator and of the orbicularis palpebarum will, however, fall to be fully examined presently, and it will then appear what is really implied in this explanation of the impairment in whistling.

2nd. While the symptoms of paralysis of the motor seventh are, contrary to Dr. Todd's statement, undoubtedly present, those indicating paralysis of the fifth are not satisfactorily demonstrated.

It must be first noted that Dr. Todd looks upon the buccin-

ator as a muscle of mastication supplied with motor power by the fifth pair. The objections to this will be stated afterwards. Meanwhile we observe that the evidence adduced of motor paralysis of the fifth nerve consists in this, that the muscles of mastication (including the buccinator) "act with less power, although it seldom happens that the power is completely destroyed." For, "while the buccinator muscle is very much paralysed, and even wasted, the masseter and other masticatory muscles retain a considerable amount of power." It is not easy to understand, from Dr. Todd's point of view, how the marked distortion of the face which he describes could, if possible at all, be produced by so small an amount of paralysis of the muscles of mastication. Further, while he ascribes the distortion of the features to paralysis of the fifth, which, it can be shown that paralysis could not produce, he says nothing of falling or obliquity of the lower jaw, which that paralysis would certainly occasion. Finally, to account for the minor degree of masticatory paralysis (to which nevertheless he ascribes all the facial symptoms), and to explain the exemption of the masseter, &c., from the atrophy which effects the buccinator, he resorts to the extraordinary assumption that "much of the action" of the masticatory muscles (*i.e.*, of all except the buccinator) "is reflex"—a strange hypothesis, which the misunderstanding of the nervous supply of the buccinator, and the necessity of making his theory consistent, could alone have originated.

It is proper to add that in one case, that of Coulson, cited by Dr. Todd (p. 710), motor paralysis of the fifth nerve was observed, and was proved by wasting of the temporal and masseter muscles; but that this case, otherwise complex, was of an exceptional kind is sufficiently evinced by Dr. Todd's own statement already noticed, that in ordinary cases of hemiplegia, even when the buccinator wastes, there is no atrophy of the masseter and temporals. The exception, by its marked contrast, serves to prove the rule, which affirms the rarity of affection of the motor fifth in ordinary hemiplegia.

Clinical observation.—The evidence of clinical observation is no less opposed to Dr. Todd's views than the anatomical and physiological considerations which his own statements have suggested. I have carefully investigated the facial phenomena in cases both of peripheral paralysis of the portio dura and of facial hemiplegia due to cerebral disease, which have occurred in the wards of the Edinburgh Royal Infirmary under my charge. In all instances hitherto, I have found that in ordinary facial palsy of cerebral origin, the muscles of expression,

including the buccinator, were more or less affected; while the action of the masseters, temporals, and pterygoids was unimpaired. The usual facial distortion was exhibited in a greater or less degree, according to the amount of the paralysis, although it rarely approached the completeness usually seen in peripheral paralysis from lesion of the nerve-trunk. The movements of smiling and of labial articulation were impeded on the paralysed side; mastication was rendered difficult so far as the action of the buccinator was concerned, but the proper masticatory movements of the jaw were vigorous and equal on the two sides. I could observe no defect or want of force in the muscles of the jaw on the paralysed side so that the weakness of the buccinator presented a marked contrast to their condition. There was no hanging down, and no lateral displacement or obliquity of the inferior maxilla, either at rest or during mastication. The mesial line between the lower incisors correspond accurately to that in the upper jaw; while on the contrary, the middle line of the lips was drawn to the sound side. As usually occurs in cerebral hemiplegia, the orbicularis palpebrarum muscle was little affected; the eyelids on the paralysed side could not be closed so firmly as on the opposite side, but the voluntary closure could take place, and the act of winking was unimpaired. Of this speciality of the orbicularis palpebrarum muscle I shall afterwards attempt an explanation. For the present, it is sufficient to observe that, with this exception, the phenomena of cerebral hemiplegia of the face are entirely similar to those of facial paralysis, produced by lesion of the seventh nerve itself, and, as in the latter, are confined to the muscles of expression, including the buccinator, and do not involve the masticatory muscles (masseter, temporal, pterygoid) supplied by the motor fifth. After a candid investigation of such cases, it appears to me as if no reasonable doubt can remain that in cerebral hemiplegia, when the face is affected, it is the motor branch of the seventh pair, and not (as Dr. Todd would have us believe) the fifth nerve, which is paralysed of motion. It is unnecessary and would be tedious to record individual cases; I shall content myself by referring to one of hemiplegia depending on cancer of the brain, in which the above facts were carefully noted, and the particulars of which are briefly referred to in the report of the Proceedings of the Medico-Chirurgical Society of Edinburgh, before which I exhibited the morbid specimen at their meeting on the 1st March, 1865; commenting at the same time upon this and other similar cases in their bearings on Dr. Todd's views. I beg also to refer, in confirmation of the clinical

evidence, to the cases of diseases of the nervous system recently published by Dr. Hughlings Jackson, in the first volume of the Clinical Lectures and Reports of the London Hospital, 1864. I am much indebted to Dr. Jackson for lately directing my attention to his cases and remarks on the subject.

I shall only add, that, while Dr. Todd's views have been readily accepted in England, I am not aware of any Continental author who has adopted or who has even appeared to be acquainted with them. The current doctrine abroad is the one which the preceding considerations lead me still to look upon as correct—that in cerebral hemiplegia, as in peripheral face-palsy, it is the motor seventh nerve which is affected. At the same time it should be observed that foreign authors have recognized, but have not explained, the differences in the phenomena of the centric and peripheral forms of facial paralysis which formed the foundation of Dr. Todd's peculiar views.

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Examination of difficulties in regard to buccinator and orbicularis palpebrarum muscles.—Loss of galvanic contractility in muscles in peripheral hemiplegia.—Other points requiring investigation.

II. It now remains to inquire what were the points of difficulty in the phenomena of facial hemiplegia which induced so distinguished an observer as Dr. Todd to adopt his peculiar views, and by which his opinions are still by some conceived to receive support. It is apparent, from what has preceded, that these difficulties are chiefly two: one of them science has long since solved, while the other still remains to be explained. The first anomaly is the affection of the *buccinator* muscle, which is paralysed both in palsy of the portio dura and in cerebral hemiplegia of the face; the second in the partial exemption of the *orbicularis palpebrarum* muscle, which is affected in peripheral paralysis of the portio dura, but escapes injury in the facial palsy of cerebral origin.

The *buccinator* muscle stands in the peculiar anatomical relation that it is supplied both by the fifth and by the seventh nerves; and, till recently, anatomists regarded the buccal branch of the fifth as either the only or the chief motor nerve of this muscle. Dr. Todd held the view that the buccinator received motor branches from both nerves, and he accounted for the double supply on the hypothesis that the facial was the motor nerve of the buccinator as a muscle of expression, while the fifth communicated the motor influence for mastication only. This hypothesis led to serious confusion and difficulty, which

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Dr. Todd felt, but from which he could not extricate himself. He confesses himself unable to understand why the buccinator muscle should be completely paralysed, even of its masticatory function, in lesion of the portio dura, which he held to be its motor nerve for expression only; and he was at no less loss to know why it was paralysed, as a muscle of expression, in what he assumed to be paralysis of the fifth pair, in cerebral hemiplegia. Of these, which he calls "curious facts," he hints at a possible explanation, in accordance with Marshall Hall's views, that the fifth nerve might possess a cerebral and the seventh a spinal character; but he at once rejects the solution as "inadequate to explain the complete palsy of the buccinator muscle when the fifth is the only nerve affected, as in common hemiplegia" (p. 649), and leaves the "facts" unexplained, and apparently inexplicable.

It is now more than twenty years since the error and difficulty in regard to the buccinator muscle was clearly corrected and explained, on the basis both of anatomical and physiological science, and of clinical observation, by M. Longet in his celebrated work "Anatomie et Physiologie du Systeme Nerveux" (Paris, 1842, ii., p. 187, and p. 408 *et seq*).* The experiments of succeeding physiologists, and the observations of physicians, have confirmed M. Longet's statements; and this point of physiological anatomy is so far settled that it is now usually accurately stated in our best ordinary text-books of physiology. The correct account is that the seventh pair is the only motor nerve of the buccinator muscle for all its actions, whether of expression or of mastication; and that the fifth pair supplies it, not with motor, but with sensory fibres. It is equally strange that Dr. Todd should have been unacquainted with Longet's observations, or that he should have entirely omitted to consider them. But it is, nevertheless, the case that not only Dr. Todd, but the principal anatomical and physiological authors and lecturers, with few exceptions, continued up to the last few years, and many still continue, to teach the erroneous doctrine that the buccinator muscle is supplied with motion by the fifth pair, and not by the seventh.† Amongst the few who taught correctly, I must not omit to mention my friend Dr. Struthers, now Professor of Anatomy in Aberdeen, who informs me that, at an early period, he became convinced, by the independent observation of clinical cases of paralysis of the portio dura, that

* Also previously by Mayo, 1823; and Volkmann, in Muller's Archiv, 1840.

† Physicians also commonly make this mistake; even the learned and accurate Hasse, in Virchow's Handbuch der Path u. Ther., Bd. iv., 343.

the motor supply of the buccinator was derived exclusively from that nerve. He has, accordingly, always so taught in his lectures, and had made a collection of clinical cases illustrative of the point, the notes of which he has obligingly forwarded to me. Not to dwell unnecessarily on this point, however, let it be understood plainly, that *the buccinator muscle is interrupted in all its functions, whether of expression or of mastication, whenever the portio dura is paralysed; it is unaffected, and all its actions are preserved, in motor paralysis of the fifth pair.* It will be perceived that this completely explains the difficulties in regard to the buccinator which Dr. Todd considered insuperable; but, at the same time, it entirely subverts his notion that paralysis of the buccinator in cerebral hemiplegia is due to lesion of the fifth nerve, and it destroys one of his main arguments for maintaining that the fifth nerve is commonly affected in that form of paralysis.

In regard to the orbicularis palpebrarum muscle, another source of difficulty appeared. In facial palsy from lesion of the portio dura, the orbicularis palpebrarum is almost invariably paralysed; the voluntary closure of the eyelids, the usual movements of winking and the shutting of the eye when the conjunctiva is irritated, all are more or less interrupted or prevented. On the contrary, in the great majority of cases of cerebral hemiplegia of the face, the orbicularis palpebrarum is not materially affected; the act of winking and of voluntary closure of the eyes continues on the paralysed as on the sound side, with the small exception that the voluntary closure is usually weaker on the palsied side. These symptoms, indeed, form one of the best diagnostic marks between centric and peripheral paralysis of the face: the hanging cheek, with wide-open, staring, unwinking eye, denotes lesion of the portio dura; the flaccid face, with the natural position and motions of the eyelids, is the sign of cerebral lesion, and indicates a more serious disease. This valuable distinction is said to have been first noted by Recamier,* its patho gnomonic value is insisted on by Dr. Todd (p. 644), and it is well known to every clinical observer. There can be but little doubt that the usual immunity of this orbicular

* Duchenne; Electrisation Localisee, 2e Edit., 1861, p. 365, note; where it is also stated that M. Duplay, in *l' Union Medicale* of Aug. 28th, 1854. "De la paralysie faciale, produite par une hemorrhagie cerebrale chez les vieillards," has reported several cases of hemiplegia, in which a cerebral cause was demonstrated on dissection, and in which nevertheless the orbicular muscle of the eyelids was paralysed. I regret that I have no means of access to this paper, as its study would probably be peculiarly interesting and instructive in relation to the present inquiry.

muscle (which is supplied by the seventh pair) in cerebral hemiplegia affecting the face, while it is so conspicuously paralysed in the peripheral paralysis of the portio dura, was one of the main reasons which led Dr. Todd to assume that in the former case it was not the seventh but the fifth nerve that was at fault. And we have heard the same fact alleged recently in support of Dr. Todd's opinions, or at least as still unaccounted for on the supposition that the seventh is the nerve affected in cerebral hemiplegia. It is important therefore to search for a solution of the difficulty.

In examining this question, it is necessary to remember that one reason why the action of the orbicularis palpebrarum is not arrested in cerebral hemiplegia is, because ordinary winking is a reflex and not a voluntary act. When the motor influence of the brain is withdrawn from a part, the rule is, that the voluntary movements cease, but the reflex action persist. Winking continues therefore in cerebral hemiplegia of the face after the mobility of features has ceased, for the same reason that respiratory movements of the intercostals and diaphragm are preserved in the cerebral hemiplegia, which deprives the limbs of voluntary power. On the other hand, both voluntary and involuntary closing of the eyelids is prevented, and the orbicularis palpebrarum and other muscles are completely paralysed in lesion of the portio dura, because the efferent conduction of all motor influence, reflex and voluntary alike, is then interrupted. In the same way, spinal hemiplegia is distinguished from cerebral by the muscles of the thorax being paralysed in conjunction with those of the limbs, because in the spinal disease the tracts for reflex action are injured simultaneously with the conductors of volition.

This explanation which accounts for part of the phenomena, may be extended, however, beyond the simple reflex actions, as follows:—

The facial motor or portio dura of the seventh pair, considered as a musculo-motor nerve, contains within its common trunk fibres serving different purposes, and provided therefore with different capacities of action. These fibres may, for our present inquiry, be divided into—1st, voluntary motor fibres, by which the voluntary movements of the features are performed, and by which especially labial and buccal speech and mastication are accomplished; 2nd, emotional fibres, by which the features express the passions more or less involuntary; 3rd, reflex motor fibres, which are involuntary for the act of winking and for the movements of the nostrils in respiration.

According to the principles of physiology, these different sets of fibres derive their peculiar functions, not from any special properties of the nervous fibres themselves, but solely from the nature of their origin or central connexions in the brain or medulla oblongata. Thus, although anatomy cannot yet trace individual fibres to their primary source there is good reason to believe that the voluntary motor fibres originate from a cerebral centre of conscious volition: those for expression must be connected with the cerebral organs of the emotions; while those for reflex action arise, more or less independently of the cerebral hemispheres, from the medulla oblongata, in connexion (*inter alia*) with the sensory branches of the fifth pair, with which they are associated in the act of winking.

If these propositions are admitted, it is clear that, in lesion of the nerve-trunk in which all the fibres indiscriminately are equally liable to be affected, not only voluntary, but emotional and reflex motions will be suspended. But when the cause of the paralysis is cerebral, the origin or course of certain sets of fibres may alone be involved by the lesion, while that of other sets, being in a different part of the encephalon, may entirely escape direct injury; and the symptoms will vary with the special seat of the central disease. The voluntary and emotional actions, either or both, which have their origin and in the cerebrum, will usually suffer; while the fibres for reflex action which have their source in the medulla oblongata, may be expected to retain their power. The play of the features will be lost, and buccal and labial speech and mastication impaired; but the natural position of semi-closure, and the involuntary winking of the eyelids will be preserved. In short, as there are three sets of fibres to be taken into account, so there are three species of paralysis of the facial nerve: voluntary motor paralysis, emotional parlaysis, reflex paralysis which may or may not co-exist.

In tracing out these views, which to some may appear too theoretical, I was not aware that any cases had been observed of centric facial hemiplegia, where the voluntary and emotional actions had been separately and independently paralysed. On referring to Romberg's work, however, I found two very remarkable cases quoted of this description. In the one case reported by Magnus,* the voluntary movements of the face were entirely lost, while the facial muscles still acted powerfully under the influence of emotion. The other case by Stroymeyer (of which I have been unable to see the original in Casper's

* Muller's Archiv for 1837, pp. 258-266, and p. 567.

"Wöchenschrift für die Gesammte Heilkunde," (1837, p. 33) is the converse of Magnus's: there was paralysis of expression and of respiratory movements on the right side of the face, with the usual facial distortion, increased by emotions or talking: but the voluntary power remained, for the patient was as able to "control the muscles on this side as those on the left. She could move the angle of the mouth, dilate her nostrils, wrinkle her forehead, and contract her eyebrows at will," &c. Magnus explains this case by supposing that the emotional impulse being the stronger, could overcome an obstacle to nervous conduction which resisted the effort of volition. But Stroymeyer's case is opposed to such a supposition. On the theory of separate nerve-centres, such as I have indicated above, both cases would be readily explained.

I should not wish to urge these theoretical views too far, nor to attach more value to them than this, that they afford an explanation in accordance with the present state of nervous physiology and pathology, and still more that they suggest further inquiry into facts, especially dissections of cerebral hemiplegia, which may, in confirming or confuting them, extend our knowledge.

Whether explicable on the principles just referred to or not, it is necessary to attend to the fact, that while the facial palsy due to lesion of the nerve is usually complete, that caused by crebral disease is nearly alway incomplete, both in the number of muscles affected and in the degree of their paralysis; the affected muscles are weakened and disabled, but have not wholly lost their power. The same partial and incomplete character is observed in cerebral hemiplegia of the limbs, the arm being usually more affected than the leg, &c. In the face it is usually the lips and cheek that are most affected, causing difficulty of articulation and mastication, and distortion on smiling; although careful observation will show at the same time diminished power in closure of the eyelids, wrinkling of the nose, &c. The partial and incomplete nature of the paralysis is further shown by the stimulus of galvanism: the galvanic contractility of muscles is greatly impaired, and is soon entirely lost, in lesion of the portio dura, while it is retained, or is only slightly enfeebled, in crerbral hemiplegia. The same difference of susceptibility to galvanic stimulus is observed in limbs, according as the brain or a nerve-lesion is the cause of the paralysis. Such facts are not inconsistent with the theory of different centric origin of several sets of fibres bound up together in the same nerve-trunk, and they afford no ground for supposing that it is

the fifth nerve, and not the seventh, which is paralysed in the ordinary cases of cerebral hemiplegia involving the face. They merely indicate that a centric lesion may involve a part only of the origins of the nerves affected, and may damage only, and not destroy even these.

Having thus discussed, so far as my present opportunities admit, the points of difficulty which had occurred to Dr. Todd and other observers, I have only further to remark, that not only does it appear certain to me that in facial hemiplegia it is the seventh, and not the fifth nerve, which is affected, but I have hitherto failed to observe any clinical evidence that the fifth pair is at all implicated in ordinary cases of facial hemiplegia.* Complicated cases occur in which the fifth and the other cerebral nerves, one or more, are involved in an intra-cranial disease; but in the ordinary cases of cerebral hemiplegia of the face, to which Dr. Todd's statement alone refers, the rule is the reverse of what he asserts: the facial is paralysed, the fifth nerve is exempt.

There are certain other points of interest which I shall not enter upon, but to which I should wish to call the attention of physiologists and of clinical observers. These are,—

1st. Why the contractility of muscles under the galvanic stimulus is speedily lost in peripheral paralysis of the portio dura, while it is retained in cerebral hemiplegia of the face? What bearing has this fact on the doctrine of the *vis insita?*

2nd. Clinical evidence of reflex paralysis of the seventh pair from impairment or lesion of the sensory portion of the fifth pair.

3rd. Why, and under what conditions, is facial paralysis succeeded by contracture or tonic spasm of the muscles previously paralysis?† I had recently under my care a patient affected with peripheral paralysis of the facial nerve, in whom the affected muscles had completely lost their contractility under the stimulus of galvanism, and in whom nevertheless, the previously palsied muscles are now the seat of contracture, as much over-shortened as they were previously over-lengthened. There has been, at the same time, some return of voluntary power in them. A casual observer seeing him for the first time, would think that the natural side of his face (the left) was paralysed, and that the opposite one exhibited the usual dragging of the features to its own side. But on voluntary or emotional action,

* Romberg, however, describes motor and sensory paralysis of the fifth pair as frequent in recent cerebral hæmorrhage. I know no evidence of this.—Sydenham Society Transactions, vol. ii., p. 289; and Muller's Archiv, 1838.

† Spasmodic tic of Marshall Hall, who first described it.

the motor power is found to be natural on the elongated left side of his face, and deficient on the shortened right one. Though the right eyelids are closer together than the left ones, he cannot by any effort close them completely, while they readily shut on the opposite side. What is the meaning of this contracture? Is it a return of muscular power in excess, or a kind of *rigor mortis?* It could only be the latter if it preceded wasting.

4th. The influence of the facial on vascularity (vaso-motion) and secretion. I have not in my cases seen any good examples of this.

5th. The influence on the palate, of which I have seen some marked examples. (See *Edinburgh Medical Journal* for August and September.

These, and several other points which this subject presents, have not been sufficiently investigated, and both scientifically and practically they are interesting and important.—*London Lancet.*

ARTICLE VIII.

MURIATE OF AMMONIA IN IRITIS.

By JOS. S. HILDRETH, M.D., Chicago, late Surgeon in charge of the Desmarres (U.S. Army) Eye and Ear Hospital.

Iritis, like pneumonia, is regarded by some authors as a self-limited affection; which theory is undoubtedly correct, if certain indications are fulfilled by treatment, otherwise, the tendency is to form mechanical and pathological complications that may compromise the eye itself. Though the exciting cause may be rheumatic, syphilitic, or scrofulous, yet something more than treatment of the general disorder will be required. The local danger, first, must be controlled, and, at the same time, as far as practicable, the existing general disturbance. The eye relieved, constitutional treatment next demands attention.

To understand the pathology, and employ the means most favorable to successful treatment of this affection, therefore, becomes of the highest importance. The subject may be considered under three heads:—

1st. Prominent characteristics of iritis, viz.:—

Change of color, swelling, and injection of the iris.

Diminution, or loss of movement of the pupil, which frequently becomes small, irregular, and rough.

Exudations between iris and capsule, into the pupil, and often upon the surface of the iris.

Hypopion, and epauchement of blood into anterior chamber.

Loss, more or less marked, of transparency of cornea, and aqueous humor.

Injection of vessels of sclerotic and conjunctiva around the cornea.

Pain in the eye, in and about the orbit, especially at night.

Fever, headache, insomnia, and other general disturbances may be well marked, or entirely absent.

2d. Prominent effects to be obtained in treatment, viz.:—

Dilate, and so maintain, the pupil until the termination of the disease.

Prevent hypopion, exudations, and epauchements, and promote their absorption when existing.

Facilitate resolution of the congestion and inflammation of the parts.

Relieve the local and other pain and disturbance of the system.

3d. Treatment.

Without dwelling upon the various means that have been, and are, employed in healing this affection, I shall pass at once to those I have found most beneficial.

If the local congestion be great, and the state of the patient will allow it, apply from six to twelve leeches to the temples, or cups.

Instillations of atropia (gr. iv, ℥j,) two or three drops every fourth or sixth hour, until the pupil dilates, if there be no mechanical obstacle; after it is dilated, one drop night and morning, and, finally, one drop daily, to the decline of the disease, will be sufficient. In some cases, more frequent instillations may be found necessary, or the strength of the solution can be increased. But care must be taken to avoid *atropinism* and excitement of the conjunctiva.

Should the state of the gastro-intestinal canal require, give a

suitable cathartic. If the stomach be very irritable, it must be allayed by appropriate means.

Morphia, codein, or extract of Indian hemp, the first in $\frac{1}{4}$ grain, the second in $\frac{1}{2}$ grain, and the last in grain doses, to allay pain, if necessary.

Exhibition of muriate of ammonia, as follows:—

If the eye, or parts about it, be painful, especially when local depletion and atropia fail to afford relief, 20 grains of muriate of ammonia may be given every half-hour, till one or two drachms have been taken. This modifies, and frequently controls, these symptoms. Congestive cephalalgia requires similar, and nausea small, doses.

If the pain is not relieved, or only partially so, narcotics should be given *pro re nata*, and the use of muriate of ammonia, in two grain doses, continued every two hours, except at night, or oftener, according to the gravity of the symptoms, until the acute stage has passed, after which two or three times daily will be sufficient.

Cases not accompanied by pain should be treated, from the commencement, by small doses. If the throat be dry, add one grain of chlorate of potassa.

Excessive transpiration must be controlled by appropriate means.

For nocturnal pain, administer large doses every half hour, as described above, accompanied or followed by narcotics, if necessary.

When leeching is inadmissible, and, in absence of mechanical causes, the pupil refuses to dilate, though there be no pain, commence with large doses also.

The following mixture is usually acceptable:—

℞. Ammoniæ Muriat., ---------- ℥j.
Syrupi Auranti, ---------- ℥ss.
Aquæ, ---------- ℥iijss.

M.S.A. Sig. one teaspoonful.

Larger quantities had better be administered in enough pure water to avoid irritation of the stomach.

In chronic cases, two grains, three times daily, will be suffi-

cient. With syphilitic complications, the bichloride of mercury; with rheumatic and scrofulous, colchicum, cod liver oil, and other suitable remedies may be given at the same time.

Under its influence, engorgement of the iris is diminished; absorption of hypopion, sanguineous epauchement, and exudation promoted; and neuralgic symptoms modified. Fever, heavy and painful sensations of the head, scantiness of urine, and constipation are controlled. Nausea is usualy relieved, and the effects of narcotics would, in some cases, seem to be promoted.

The action of this salt, in the treatment of iritis, may be summed up as follows:—

a. Large doses modify neuralgic pain, congestive cephalalgia, and frequently act as a laxative.

b. Small doses exert an influence on the capillary, glandular, and lymphatic systems which facilitates dilatation of the pupil, resolution of the inflammation, absorption of exudations, hypopion, etc.

c. It allays nausea, unless the dose be too large, or the stomach very irritable.

d. Fever, coated tongue, and other constitutional disturbances are relieved.

e. It appears to facilitate the action of narcotics, and produces no irritation of the conjunctiva.

The value of mercury, quinia, iodide of potassium, oil of turpentine, and some other remedies, in the treatment of this affection, is to well known to require comment. Yet, from no single remedy, except belladonna, have I been able to obtain so satisfactory results, as from the one specially dwelt upon in this article.

Its admissibility in many conditions of the system, wide range of action, facility and safety of administration render it peculiarly applicable to this class of cases.

The bromide of ammonia has, in some respects, properties quite similar.

From 30 to 60 grains, well diluted, exert a decided hypnotic action, and small quantities produce some of the effects of the muriate. For certain patients, I think the former preferable

in large doses to the latter; but as a resolvent, present experience favors the *chlorine* salt.

Thorough and carefully conducted clinical observations, of over three years, have demonstrated the truth of the above. During this period, every known form of the disease has fallen under my care, whilst military discipline has afforded an opportunity to follow each case from the commencement of treatment to its close.

Feb. 5, 1866.

Book Notices.

Obscure Diseases of the Brain and Mind. By Forbes Winslow, M.D., D.C.L., Oxon, &c., &c. Second American, from the Third and Revised English Edition. Philadelphia: Henry C. Lea. Price $4.25—pp. 483. 1866.

This work has been before the profession long enough to be well known. The present edition is published in excellent style, and contains evidence of having been carefully revised. The author's style is pleasing, and the topics he discusses are of very great importance. The work is divided into twenty-five chapters, embracing the following topics:—

1. Introduction, on the Importance of Early Attention to, and Early Treatment of, Affections of the Brain and Mind.
2. Morbid Phenomena of Intelligence.
3. Premonitory Symptoms of Insanity.
4. Confessions of Patients after recovering from Insanity; or the Condition of the Mind when in a State of Aberration.
5. State of the Mind, when recovering from an Attack of Insanity.
6. Anomalous and Marked Affections of the Mind.
7. The Stage of Consciousness.
8. Stage of Exaltation.
9. Stage of Mental Depression.
10. Stage of Mental Aberration.
11. Impairment of Mind.

12. Morbid Phenomena of Attention.
13. Morbid Phenomena of Memory.
14. Acute Disorders of the Memory.
15. Chronic Affections of the Memory.
16. Perversion and Exaltation of Memory—Memory of the Insane.
17. Psychology and Pathology of Memory.
18. Morbid Phenomena of Motion.
19. Morbid Phenomena of Speech.
20. Morbid Phenomena of Sensation.
21. Morbid Phenomena of Special Senses.
22. Morbid Phenomena of Vision, Hearing, Taste, Touch, and Smell.
23. Morbid Phenomena of Sleep and Dreaming.
24. Morbid Phenomena of Organic and Nutritive Life.
25. General Principles of Pathology, Diagnosis, Treatment, and Prophylaxis.

As we cannot take time to analyze the work or do justice to it as a critic, we simply quote so much of the table of contents as will give the reader a proper idea of the subjects discussed. It is an interesting volume that will amply repay for a careful perusal by all intelligent readers.

For sale by W. B. KEEN & Co., 148 Lake St.

EXPERIMENTAL INVESTIGATIONS IN TO THE ACTIONAND USES OF THE BROMIDE OF POTASSIUM. By ROBERTS BARTHOLOW, M.D., Prof. of Physics and Medical Chemistry in the Medical College of Ohio.

This is a little pamphlet of 16 pages, the contents of which were first published in the *Cincinnati Lancet and Observer*. The detail of the author's experiments with the bromide of potassium are interesting and instructive. The following are the conclusions at which he arrives in relation to the *modus operandi* and therapeutic action of the drug:—

After a careful survey of all the facts we are able to construct a theory of the action and *methodus medendi* of the bromide of potassium. I put this in the shape of the following conclusions:—

1. The bromide of potassium acts by absorption into the blood;

2. Its effects are expended upon the nervous centres, or the cerebro spinal axis;

3. Sedation of the heart and circulation, and the various local sedative effects are secondary results of the impression made upon the nervous centres;

4. Its physiological effects are not very decided, and are easily modified by any local disturbance;

5. Its therapeutical action is still more decidedly influenced by local morbid processes;

6. It is indicated where a sedative to the nervous system is required—in insomnia; too great reflex excitability; nervous and spasmodic affections of the larynx and bronchi; sexual excitement; and in an irritable state of the sexual organs;

7. It will be effectual in the foregoing conditions, in proportion to the degree in which structural lesions are absent, or in other words, in proportion to the degree in which these morbid states are functional rather than organic.

Dr. Bartholow thinks the bromide of potassium less efficient as an alterative than the iodide.

LECTURES ON THE DISEASES OF INFANCY AND CHILDHOOD. By CHARLES WEST, M.D., Fellow of the Royal College of Physicians; Physician to the Hospital for Sick Children. Fourth American, from the Fifth revised and enlarged English Edition. Philadelphia: HENRY C. LEA. 1866.

The merits of a book that has passed through four editions within a few years, should be well known to the profession at large. This work is a good-sized octavo volume of 654 pages, printed on good paper and fair type. The author had unusual opportunities for observation in relation to the diseases of infancy and childhood, and seems to have possessed all the requisite qualifications for improving his opportunities to good advantage. Hence, we have, in the present edition of his work, one of the very best treatises on those diseases accessible to the student and practitioner. It is worthy of a place in every physician's library.

For sale by W. B. KEEN & Co., 148 Lake St. Price $4.50.

Editorial.

Our State and National Medical Associations.—In our issue of last month, we called the attention of our readers to the fact that the approaching Annual Meeting of the Illinois State Medical Society would not be held until the first Tuesday in June, on account of the next meeting of the American Medical Association being held in Baltimore, on the first Tuesday in May.

In the present number of the Examiner will be found the official notice of the Permanent Secretary of the Association, containing a list of the Committees expected to report at that meeting. We are also informed that preparations are already being made to insure an unusually large representation at the next meeting from all the Eastern, Middle, and Southern States, and that the coming meeting will probably be the largest and most interesting one ever held. Will our professional brethren throughout the North-western States see that the portion of the profession they represent is not behind in its appreciation of either social unity and enjoyment or scientific advancement.

The first Tuesday of May will soon come. Let the local societies lose no time in appointing their delegates. And let the delegates appointed by the State Medical Society last year, remember that they will be expected to do more than have their names reported to the Secretary this year. Every one of them should regard it as a duty to be in Baltimore at the coming meeting.

Chicago Medical Society.—The regular meeting of this Society, on Friday evening, Feb. 2d, 1866, was one of more than ordinary interest. Dr. J. P. Ross, one of the physicians to the County Hospital, presented, as pathological specimens, the stomach and liver of a patient who had died two days previously, from cancerous disease of those organs. The stomach was much contracted in size, and at and near the pyloric orifice its coats had undergone a well-marked cancerous degeneration,

and had attained a thickness of an inch or more, but the pyloric orifice itself was not obstructed by contraction or concentric thickening of the parts. The liver was considerably increased in size, of a deep reddish-brown color, and contained several cancerous masses, some of which were two inches in diameter. The body was extremely emaciated, the skin sallow, but no important evidences of disease were found in any of the organs, except the stomach and liver. The man had been admitted into the hospital about two weeks before his death, in a state of extreme exhaustion. This, with a natural mental imbecility, rendered it impossible to obtain from him any account of his history or symptoms previous to his admission; and the friend who brought him to the hospital gave no information. During the two weeks he was in the hospital, he manifested a decided aversion to taking food of any kind, and took but little except wine and water. But he made no complaint of pain, or nausea, or vomiting, by which any serious disease of the stomach could have been suspected. The chief symptoms were mental drowsiness and extreme physical exhaustion. Dr. Ross stated that the diseased portion of the stomach and liver had been examined under the microscope, and were found to contain the cells with large nuclei and nucleoli, usually regarded as characteristic of cancer. Those in the liver were smaller than in the stomach. The case elicited some discussion, which was participated in by several members.

Dr. T. D. Fitch described the *post mortem* appearances of a case which had been recently the subject of a coroner's inquest. The subject was a man who had evidently been drinking liquors, and had been forcibly pushed out of a disreputable house, and immediately taken, together with the inmates of the house, to the Armory by the police. In a very few minutes after his arrival at the Armory he was found to be dead. The *post mortem* examination revealed no marks of violence on his person, and no evidences of disease, except in the intestines and brain. The transverse colon, near the left angle, was very much contracted for three or four inches, it then became abruptly distended to a great degree and turned forward so as to lie in

front of the omentum, for a distance of nine or ten inches. It then turned back to its normal position and again became much contracted for several inches. The coats of the intestine, especially in the contracted portions, were thick and dense, while the distended portion was filled with gas. There were no appearances of inflammation in any part of the digestive organs, except the mucous membrane of the stomach, which presented that reddened and vascular condition generally induced by the habitual use of intoxicating drinks. The contents of the stomach emitted a very strong aromatic odor, which was supposed to arise from his having drank spiced liquors. On opening the cranium, some apparently old adhesions were found between the membranes and several points of ossific deposit in the dura mater. The vessels of the brain were congested, especially the lower part of the anterior lobes and the upper part of the medulla oblongata. There were no effusions of serum, either upon the surface or into the ventricles, and no extravasations of blood. On raising up the anterior lobes, about two drachms of semi-fluid or gelatinous substance were found lying over the ethmoid bone. On removing this, the bony plate was found denuded of its membrane and in a carious condition. It was proved before the coroner that the man had recently purchased an ounce of laudanum and some sugar-coated pills containing each one-quarter of a grain of morphine. The vial was found empty, and a large part of the pills gone, but there was no direct proof that he had taken either of them, and there was no smell of laudanum in the contents of the stomach. And, yet, the verdict of the coroner's jury was, that the man died from an overdose of laudanum taken by himself. If we assume, however, that the man was able to stand up and walk when he was pushed out of the saloon, and that he died in half an hour afterwards, it would militate strongly against the idea that the death was caused by any preparation of opium. From the condition of the brain and its membranes, the death is quite as likely to have resulted either from the excessive use of alcoholic drinks or from a sudden apoplectic congestion of the base of the brain, as from opium.

Several other cases were related, and an interesting discussion was continued until the hour of adjournment.

Case of Cerebro-Spinal Meningitis.—We copy the following letter, as it contains an interesting account of one of the most fatal forms of disease. In regard to the treatment, we will only remark that, if the case had come under our care, we would have given less calomel, and, in addition to the other measures, have given a solution of the permanganate of potassa freely:—

West Point, Lee Co., Iowa,
January 11th, 1866.

Professor N. S. Davis, M.D.,

Dear Sir:—I herewith send you the report of a case of cerebro-spinal meningitis, its treatment, and result. It would not only be to my gratification, but to that of several members of the profession here, if you would state your opinion of the case, and treatment employed.

Mrs. B., *æt.* 48, bilious lymphatic temperament, had been to a social gathering at the house of one of her friends, on the evening of the 29th of December, 1865. After her return, while preparing to retire for the night, she was attacked with "choking" sensation, pain, and severe cramping in the occipital and post-cervical regions. Her husband immediately went for medical aid, Dr. Sala, the family physician, (with whom I have the pleasure of being associated in practice,) returning with him. On examination, the pupils were found to be strongly contracted, and the head violently drawn backward. Respiration slower and fuller than natural. Pulse 120. Head and general surface cold. Complained of very severe pains in the back of her head and neck. Her spine was immediately rubbed with a very strong chloroform liniment, and a large blister of cantharides applied. At the same time, gave her hyd. chl. mit. grs. xxx.

The next morning (Dec. 30th,) I saw the patient for the first time, with Dr. Sala. Her condition was about the same as on the previous night, but we noticed paralysis of the left side, which had taken complete possession of the left arm, and was

progressing slowly to invest the whole of the corresponding side. She also complained of severe pain in the right anterior cerebral region. Tongue coated with a thick, ash-colored fur, and cannot answer questions intelligibly. The blister was now removed, and an ointment of belladonna was substituted. At the same time, employed the hyd. chl. mit. in doses of grs. iij, every two hours, together with a strong solution of chlorate potash, and sinapisms to limbs and feet.

12 M.—Paralysis has extended to left limb and left side of face. Pulse now about 86, and of a remarkable intermittent character; head and face still cool; pupils fairly dilated. Renewed belladonna ointment, and continued the hyd. chl. mit.

4 P.M.—Deglutition is becoming impaired, but no change for the better.

7½ P.M.—Dr. Atkinson, of Dover, Iowa, called to see patient in consultation. He has had considerable experience with the disease. Expressed himself satisfied with the treatment employed, and recommended perseverance in present management of the case.

11 P.M.—Reaction was setting in. Face flushed and head hot. Apply cold during night.

Dec. 31st, 7 A.M.—Head and face still hot, with general febrile symptoms. Respiration carried on by right lung entirely. Were preparing to apply the ice-cap, when color left her face, and the head became cool as during the previous day. Employed now, in addition to former treatment, the tinct. cantharides, in doses of gtt. xxv, every hour.

10 A.M—The paralytic expression of left side of face is disappearing, and she moves the thumb and fingers of the left hand somewhat, but still does not show any sensibility to external impressions, until I removed the belladonna ointment from her neck, when she threw up her right hand and moaned. Applied the ung. hyd. to blistered surface, to get the alterative effects as soon as possible. As the bowels had not moved, ordered an enema of

℞. Ol. Ricini,---------- ℥ij.
Ol. Terebinth.,---------- ℥j.
Aqua,---------- oj.

3 P.M.—As no movement of the bowels had yet ensued, ordered second enema, and the addition of strychnia sulph. gr. 1-20 to each powder of hyd. chl. mit. In about 15 minutes after second enema had been given, she had three copious, bile-colored discharges, in rapid succession, which seemed to cause an improvement in her symptoms. Pulse now about 86 per minute, firm, and full; skin covered with a warm moisture.

5 P.M.—Patient again becoming worse. Left side of face again assuming the peculiar expression of paralysis. Mucus, in large quantity, accumulating in the throat, so as to lead to the apprehension that she would choke to death. Succeeded in dislodging some of it with my finger, but rapidly fills up. Applied ice to her lips, but without the least appreciation of it on her part. She now sank gradually, coma supervening, and death making its appearance at 9 P.M.

This is the first appearance of cerebro-spinal meningitis in this section. Another case (a child of five years of age,) is now convalescing under the same treatment detailed above. I should be pleased, Dr., if you would also give us any new idea regarding the pathology and treatment of this much-dreaded disease, at your earliest convenience.

Very respectfully,

G. A. KUECHEN, M.D.,

Late Surgeon 154*th Ill. Vol. Infantry.*

ANNUAL COLLEGE COMMENCEMENT.—The Public Annual Commencement for conferring degrees, in the Chicago Medical College, will be held on the evening of the *first day* of March, next. Prof. BYFORD will give the valedictory address.

RUSH MEDICAL COLLEGE COMMENCEMENT.—The Public Annual Commencement in Rush Medical College, of this city, was held in Smith & Nixon's Hall, on the evening of Jan'y 24th, 1866. The President of the Faculty, Prof. D. BRAINARD, being absent, Prof. J. W. FREER officiated in his place, and, after some remarks in relation to the history of the College and its present prosperity, conferred the degree of Doctor of

Medicine upon ninety candidates for graduation; the *ad eundem* degree upon four; and the honorary degree upon one. The valedictory address was delivered by Prof. J. ADAMS ALLEN, in his usual facetious and pleasant style. It was attentively listened to by a large and appreciative audience, and warmly applauded by the class of students in attendance.

LONDON LANCET.—This excellent representative of the English periodical medical literature, reaches us promptly, and is always filled with a large amount and variety of matter of interest and value to every member of the profession.

AMERICAN MEDICAL ASSOCIATION.

The Seventeenth Annual Session will be held in the City of Baltimore, on Tuesday, May 1, 1866.

The following Committees are expected to report:—

On Prize Essays, Dr. Austin Flint, Sr., N.Y., Chairman.

On Quarantine, Dr. Wilson Jewell, Pa., Chairman.

On So-called Spotted Fever, Dr. Jas. J. Levick, Pa., Ch'n.

On Ligature of the Subclavian Artery, Dr. Willard Parker, N.Y., Chairman.

On Tracheotomy in Membranous Croup, Dr. Alex. N. Dougherty, N.J., Chairman.

On Rank of Medical Corps in the Army, Dr. C. S. Tripler, U.S.A., Chairman.

On Rank of Medical Corps in the Navy, Dr. T. L. Smith, N.Y., Chairman.

On Medical Literature, Dr. C. A. Lee, N.Y., Chairman.

On Medical Education, Dr. Samuel D. Gross, Pa., Chairman.

On American Necrology, Dr. C. C. Cox, Md., Chairman.

On Patent Rights and Medical Men, Dr. David Prince, Ill., Chairman.

On Alcohol and its Relations to Man, Dr. Gerard E. Morgan, Md., Chairman.

On Insanity, Dr. Alfred Hitchcock, Mass., Chairman.

On Milk Sickness, Dr. Robert Thompson, Ohio, Chairman.

On the Relation which the Doctrine of the Correlation and Conservation of Forces bears to the Physiological and Pathological Condition of the Human System, Dr. S. L. Loomis, D.C., Chairman.

On the Progress of Medical Science, Dr. Jerome Candee Smith, N.Y., Chairman.

On Diphtheria, Dr. H. D. Holton, Vt., Chairman.

On the Comparative Value of Life in City and Country, Dr. Edw. Jarvis, Mass., Chairman.

On Drainage and Sewerage of Cities in their Influence on Health, Dr. Wilson Jewell, Pa., Chairman.

What Effect has Civilization on the Duration of Human Life, Dr. Augustus A. Gould, Mass., Chairman.

On Disinfectants, Dr. E. M. Hunt, N.J., Chairman

On Compulsory Vaccination, Dr. A. Nelson Bell, N.Y., Ch'n.

On Strangulated Hernia, Dr. W. F. Peck, Iowa, Chairman.

On the Causes and Pathology of Pyæmia, Dr. J. J. Woodward, U.S.A., Chairman.

On the Use of Plaster of Paris in Surgery, Dr. Jas. L. Little, N.Y., Chairman.

On the Etiological and Pathological Relations of Epidemic Erysipelas, Spotted Fever, Diphtheria, and Scarlatina, Dr. N. S. Davis, Ill., Chairman.

On Meteorology, Medical Topography, and Epidemics, Drs. J. C. Weston, Me.; P. A. Stackpole, N.H.; C. L. Allen, Vt.; A. C. Garratt, Mass.; C. W. Parsons, R.I.; B. H. Catlin, Ct.; E. M. Chapman, N.Y.; E. M. Hunt, N.J.; D. Francis Condie, Pa.; T. Antisell, D.C.; O. S. Mahon, Md.; T. M. Logan, Cal.; R. C. Hamill, Ill.; J. W. H. Baker, Iowa; Abm. Sager, Mich.; J. W. Russell, Ohio.

WM. B. ATKINSON,
Permanent Secretary, Philadelphia.

OBITUARY.—DEATH OF DR. WILLIAM B. HERRICK.

On the last day of December, 1865, in the Insane Asylum at Augusta, Me., died Dr. William B. Herrick, formerly of this city. The intelligence of this painful termination of an useful and honored life will be received with sadness by many of our older citizens, to whom deceased was well known as the possessor of rare personal and professional qualities, demonstrated during the years of surgical career in Chicago. Dr. Herrick, at the time of his death, was about fifty years of age. He was a native of Lewiston Falls, Me. Receiving a liberal education, he came to Illinois a-quarter of a century ago, and for several years accumulated a practice and reputation in the interior of the State, whence he was called about the year 1845 to fill a chair in Rush Medical College in this city. Few who have been associated with him, in the office of medical instructor, ever exceeded him in the influence he had upon his students by the zealous and high-toned ardor that characterized his quest of science, and his own enthusiasm he was skilled in communicating

to those who in his guidance pursued the paths of learning. At the outbreak of the Mexican war, Dr. Herrick temporary vacated his chair, and entered the service as surgeon of an Illinois regiment. It is volumes to say of the reputation that he received in the field, when it is stated that at the expiration of the term of his voluntary enlistment, the close of the war, the Medical Bureau of the Government with great regret received his declination of the rare compliment of an appointment to the medical staff of the regular army. But Dr. Herrick's heart was with his college, and he came back with his qualities ripened and strengthened to fill an even more distinguished rank in his coveted place among his fellows. Like too many of those who with him escaped the actual presence of death in the terrible campaigns and climate of Mexico, the destroyer followed him home to prey leisurely but surely upon his life. Struggling against the disease with all the appliances of skill, his chronic neuralgia became paralysis, terminating in a softening of the brain, reducing the strong framed and acute minded man to the bodily and mental wreck upon which the office of death seemed less kind because delayed through seven long years of darkness. In the loss of Dr. Herrick, dating from the beginning of the painful eclipse of his faculties, the cause of science in the West lost a noble and zealous votary, and our community a valued and generous citizen.—*Chicago Tribune.*

Copaiba Deprived of its Disagreeable Smell.—Copaiba and pitch, of each one ounce; magnesia, a sufficient quantity to make a mass. According to the greater or less amount of magnesia, the mass will be more or less consistent. If the latter, a teaspoonful may be given two or three times a-day; if the former, pills may be made. M. Beyran, of Paris, has found this preparation not only effectual, but to present none of the usual and very offensive odor of the copaiba.—*London Lancet.*

A Nice Point of Differential Diagnosis.—M. Gilbert lately stated before the Academy of Medicine of Paris that in the diarrhœa premonitary of cholera (miasmatic diarrhœa) the tongue is swollen, pale, moist, white and covered with a layer of mucus; whilst in bilious or inflammatory diarrhœa the tongue is red, dry, small, and sharp-pointed.

Mortality for the Month of January.—Below will be found a table of the mortality of Chicago for the month of January, as taken from the books of the health-officer. The whole

number of deaths is 293, being an increase of 68 over the deaths for the same month of the year previous. The most prevalent disease seems to have been diphtheria, although the report indicates a generally healthy condition of the city. Croup and diphtheria, the diseases most prevalent among children in winter, were the causes of 60 deaths—almost a-fourth of the whole number.

DISEASES.

The following table shows the causes of death and the number of each:—

Accidents,	1	Inflammation of Bowels,	5
Asthma,	3	Inflammation of Lungs,	7
Apoplexy,	2	Inflammation of Stomach,	1
Brain Fever,	3	Lung Fever,	6
Bronchitis,	2	Liver Complaint,	1
Congestion of Lungs,	6	Nervous Fever,	4
Congestion of Brain,	3	Old Age,	11
Colds,	2	Pneumonia,	2
Cancer,	1	Purpura,	1
Consumption,	25	Stillborn,	17
Cramps,	19	Suicide,	2
Croup,	29	Starvation,	1
Convulsions,	5	Scarlet Fever,	6
Childbirth,	7	Small-Pox,	2
Cerebro-Spinal Meningitis,	1	Typhoid Fever,	17
Decline,	4	Teething,	8
Diphtheria,	31	Whooping-Cough,	1
Delirium Tremens,	1	Water on Brain,	5
Dropsy,	11	Fever,	2
Dysentery,	2	Heart Disease,	3
Diarrhœa,	1	Imbecility,	1
Exposure,	1	Intermittent Fever,	1
Erysipelas,	3	Unknown,	20
Found Dead,	2		
Frozen,	1	Total,	293
Inflammation of Brain,	1		

NATIVITIES.

The following table shows the nativity of the deceased:—

Chicago,	163	Germany	37	Scotland,	2
Other States,	43	Isle of Man,	1	Sweden,	2
Bohemia,	2	Ireland,	19	Unknown,	6
Canada,	4	Norway,	6		
England,	6	France,	2	Total	293

AGES OF THE DECEASED.—Under 5 years, 152; over 5 and under 10 years 18; over 10 and under 20, 11; over 20, and under 30, 29; over 30 and under 40, 26; over 40 and under 50, 17; over 50 and under 60, 14; over 60 and under 70, 9; over 70 and under 80, 9; over 90, 1; unknown, 7. Total, 293.

January, 1866.		January, 1865.	
North Division,	74	North Division,	61
South Division,	115	South Division,	82
West Division,	104	West Division,	82
Total,	293	Total,	225

DEATHS DURING THE YEAR.

Below will be found a monthly tabular statement of the deaths in each division of the City, as shown by the official report of the health-officer:—

Month.	S. D.	N. D.	W. D.	Total.
January	82	61	82	225
February	101	61	94	256
March	97	64	118	279
April	100	57	93	250
May	88	48	93	229
June	70	43	84	197
July	130	122	173	425
August	139	127	198	464
September	98	94	154	346
October	125	79	156	360
November	104	75	120	299
December	102	89	142	333
Totals,	1,236	920	1,507	3,663

AGES.

The following is a statement of the ages of the deceased:—

Years.	No.	Years.	No.
Under 5	1,898	From 70 to 80	71
From 5 to 10	215	From 80 to 90	21
From 10 to 20	170	From 90 to 100	3
From 20 to 30	312	Over 100	1
From 30 to 40	379	Stillborn	69
From 40 to 50	178	Unknown	98
From 50 to 60	130		
From 60 to 70	118	Total	3,663

The following is a statement, showing the nativities of the deceased:—

NATIVITIES.

Chicago,	1,997	France,	9	Belgium,	3
Other States,	559	Italy,	6	Russia,	1
Canada,	41	Indian,	1	Colored,	19
England,	68	Germany,	352	At Sea,	2
Ireland,	377	Holland,	4	Unknown,	69
Scotland,	23	Prussia,	2		
Wales,	7	Bohemia,	13	Total,	3,363
Norway,	58	Denmark,	9		
Sweden,	41	Poland,	2		

CAUSES OF DEATH.

The following statement shows the causes tending to produce death in the cases of the above:—

Accidents,	78	Hemorrhage,	5
Apoplexy,	21	Hemorrhage of Bowels,	1
Asthma,	2	Hernia,	1
Bilious Fever,	24	Inanition,	3
Brain Fever,	45	Infanticide,	1
Congestive Fever,	3	Infantile Remittent,	1

Intermittent Fever,	10	Inflammation of Bladder,	1
Lung Fever,	32	Inflammation of Bowels,	76
Nervous Fever,	38	Inflammation of Brain,	35
Puerperal Fever,	12	Inflammation of Chest,	2
Scarlet Fever,	90	Inflammation of Head,	1
Ship Fever,	2	Inflammation of Kidneys,	6
Spotted Fever,	8	Inflammation of Liver,	2
Typhoid Fever,	129	Inflammation of Lungs,	95
Typhus Fever,	11	Inflammation of Stomach,	3
Bronchitis,	1	Influenza,	1
Burned,	8	Injuries,	5
Calculus,	1	Intemperance,	9
Cancer,	21	Jaundice,	4
Catarrh,	1	Liver Complaint,	14
Cerebritis,	1	Lockjaw,	3
Cerebro Meningitis,	1	Lung Complaint,	2
Childbirth,	62	Marasmus,	15
Cholera Infantum,	27	Measles,	22
Cholera Morbus,	24	Meningitis,	2
Chronic Diarrhœa,	2	Neglect,	1
Colds,	23	Neuraligia,	1
Congestion of Bowels,	6	Old Age,	84
Congestion of Brain,	38	Ovarian Tumor,	1
Congestion of Bronchial Tubes,	1	Paralysis,	16
Congestion of Kidneys,	1	Paralysis of Brain,	1
Congestion of Liver,	3	Phthisis,	1
Congestion of Lungs,	28	Pleurisy,	1
Congestive Chills,	4	Pneumonia,	21
Consumption,	343	Poisoned,	2
Convulsions,	117	Puerperal Hemorrhage,	1
Cramps,	213	Quinsy,	1
Croup,	258	Rheumatism,	7
Decline,	3	Scalded,	3
Delirium Tremens,	3	Scarlatina,	1
Diabetes,	1	Sciatica,	1
Diarrhœa,	81	Scrofula,	4
Diphtheria,	170	Shot,	3
Disease of Bowels,	1	Small-Pox,	57
Disease of Brain,	3	Sore Throat,	10
Disease of Head,	1	Spasms,	7
Disease of Lungs,	2	Spinal Complaint,	18
Disease of Stomach,	1	Stabbed,	1
Dropsy,	78	Stillborn,	137
Dropsy on Brain,	13	Suffocation,	7
Drowned,	35	Suicide,	13
Dysentery,	83	Summer Complaint,	303
Epilepsy,	2	Sun-stroke,	4
Epileptic Fits,	2	Suppressed Menstruation	1
Erysipelas,	19	Teething,	14
Flux,	1	Tumor,	3
Found Dead,	13	Ulcer,	1
Gangrene,	1	Ulceration of Bowels,	1
Gastritis,	1	Water on Brain,	28
General Debility,	2	Whooping-Cough,	15
Gravel,	1	Worms,	3
Green Canker,	1	Unknown,	234
Hair-lip,	1		
Heart Disease,	38	Total,	3,663

DEATHS IN FORMER YEARS.

The following statement gives the number of deaths which have taken place in the City annually for the past 19 years:—

1847	520	1858	2,049
1848	560	1859	1,826
1849	1,578	1860	2,056
1850	1,335	1861	2,069
1851	844	1862	2,575
1852	1,648	1863	3,522
1853	1,203	1864	4,033
1854	3,830	1865	3,633
1855	1,983		
1856	1,893	Total in 19 years,	39,234
1857	2,167		

ANOTHER VICTIM OF THE RISKS CONNECTED WITH THE MEDICAL PROFESSION.—M. Bauchet, an extremely promising hospital surgeon, and assistant professor at the Faculty of Paris, has just died from the effects of a morbid poison, which gained access to the economy by an insignificant scratch on the finger, to which the deceased had paid no attention. He was well known as an indefatigable worker in the field of science, and died universally regretted. M. Bauchet was especially regarded and esteemed by M. Velpeau, and this veteran surgeon, deeply moved, paid at the funeral a warm tribute to his departed young friend.—*London Lancet.*

VACCINATION AND SYPHILIS.—This highly important subject has been fully treated by the *Siglo Medico*, a Spanish medical paper. In this article we find statistical tables of some value. The author, in collecting data respecting the instances of syphilitic contamination through the vaccine virus, has been led to draw up a table which show that the disease was communicated 224 times out of 314 vaccinations. It should be noticed that the 93 negative cases were such as evidently *might* have conveyed the complaint.

GALACTOZYME.—Galactozyme, or galozyme, is the result of the fermentation of milk by means of yeast, and is used, as stated by Dr. Schnaepff in the *Gazette Hebdomadaire*, by the inhabitants of the Steppes of Russia as a sovereign remedy in pthisis. Cases are mentioned by Dr. Schnaepff's article where the patients gained considerably in weight by taking half a tumblerful night and morning; but the doses must be regulated by the peculiarities of the patient. Nor is it indifferent whether the fermentation is carried to a greater or less extent.

BORDEN'S EXTRACT OF BEEF,

For the immediate production of Beef-Tea.

This Extract consists of the juices of Choice Beef, cooked in the most perfect manner and concentrated by evaporation in vacuo into the smallest bulk. One pound comprises the soluble portions of twenty pounds of fresh beef obtained from mature animals slaughtered while in perfect health.

This Extract of Beef differs from Borden's Meat Biscuit (see U. S. Dispensatory) by being concentrated to a degree four times greater, and in not containing the farinaceous constituent, without the aid of which perfect preservation had not then been obtained. It is a nut-brown substance of the consistence of caoutchouc, possessing the flavor of delicately roasted meat and keeps in perfect condition for an indefinite length of time.

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